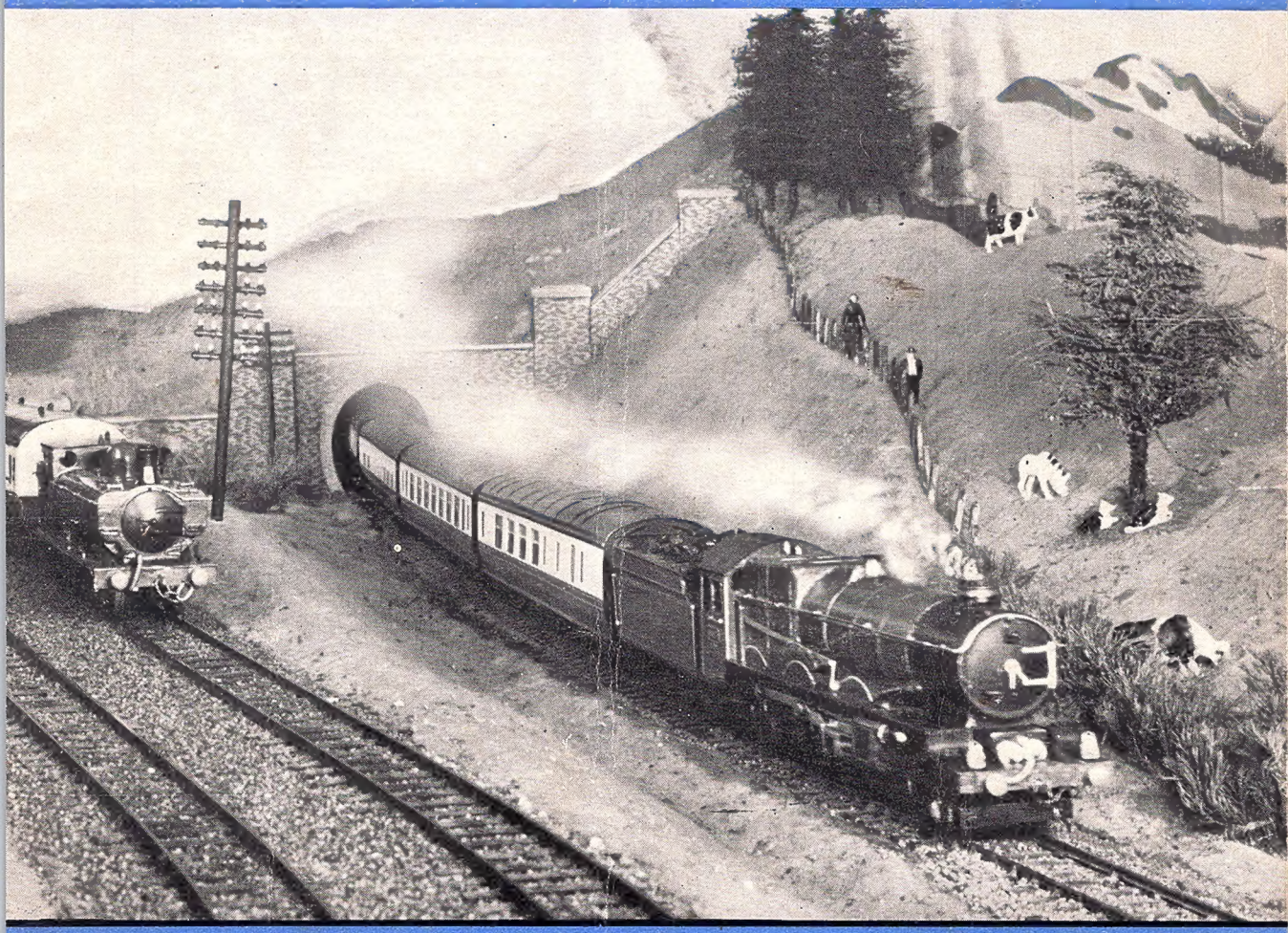
RAILWAY MODELLER

JANUARY 1956



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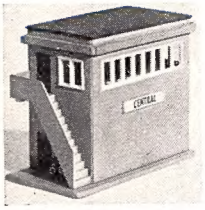

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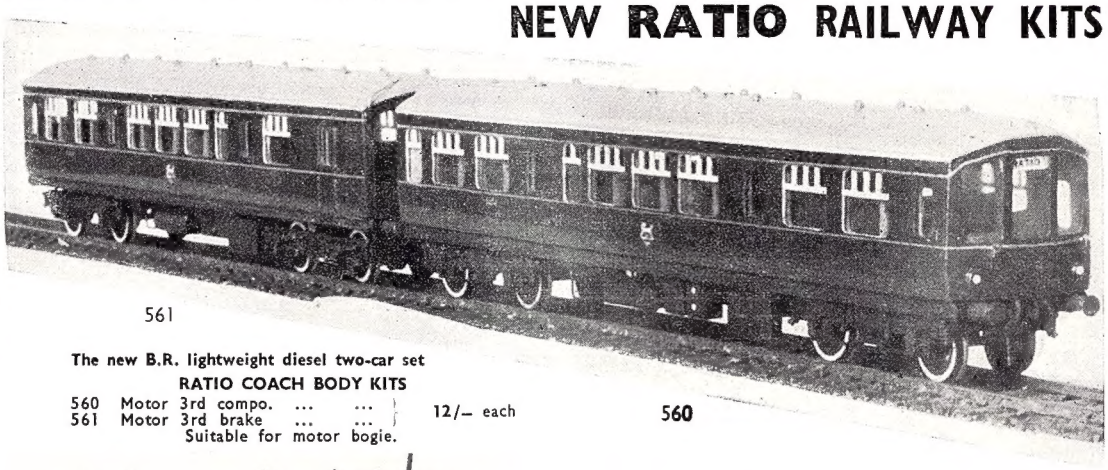

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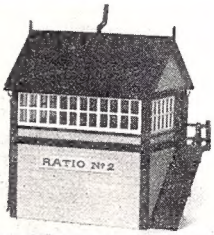

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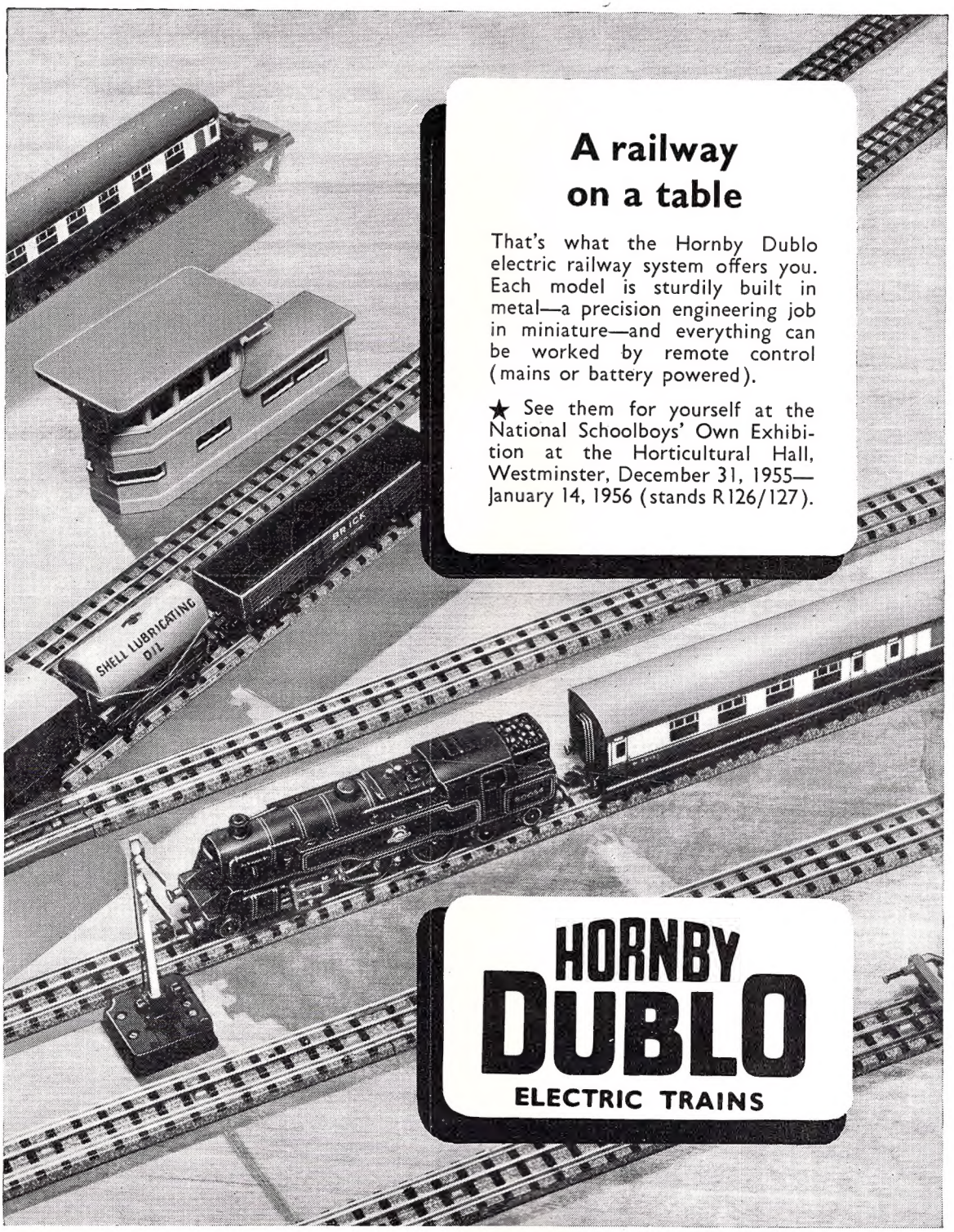
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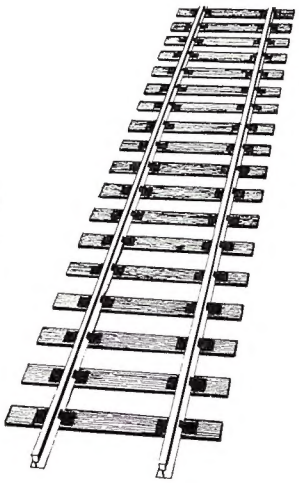

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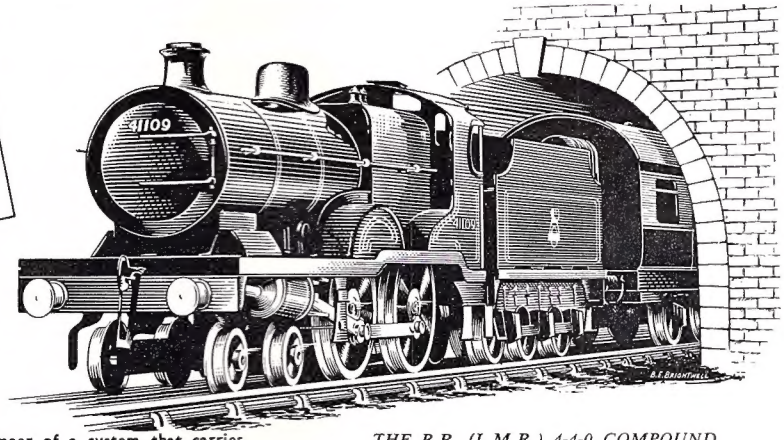

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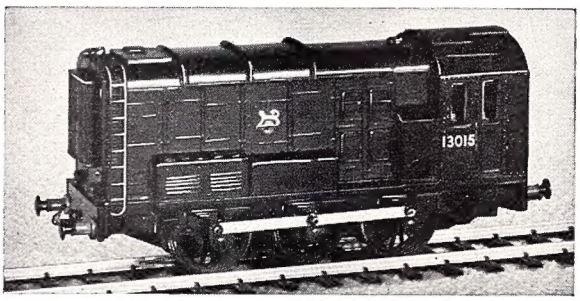

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For the Average Enthusiast Specializing in Small Scale Railway Modelling

VOL. 7. No. 63. JANUARY 1956

Managing
S. C. PRITCHARD

Editor
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Advertising
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SEATON : DEVON
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NEXT MONTH

The Edinburgh and Lothians Club is fully represented, with P. D. Hancock on "Ormistone Station," John Charmar on "Timetable Working on the Charford Branch" and Ken Northwood's final notes on King Farish.

THE LOBBY

A Happy New Year to You

NOTHING could be more desirable or appropriate than to start number one of the new year with these customary few words, for what more could we wish our readers than continued happiness in 1956 ? The fact that we play no small part in fostering this wonderful hobby of ours is in itself a pleasure to us, but it is most gratifying to learn from the many cards and letters we have received over the Christmas period that the RAILWAY MODELLER gives so much pleasure to countless people at home and overseas.

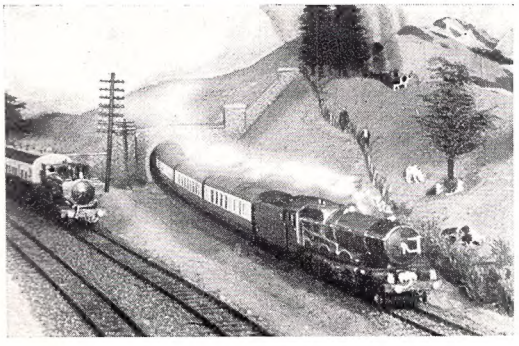
At home this is, of course, the height of the modelling season. Many enthusiasts are busy on the masterpieces they intend to exhibit at the Model Railway Exhibition but three short months ahead ; others are deep in operating sessions, laying extensions to their systems, or whatever may be their particular bent. However, for many of our overseas readers this is the exact opposite ; nevertheless, the hobby is very firmly established in Australia, New Zealand and South Africa, for many clubs have been formed, and we learn that elsewhere in the Commonwealth enthusiasts are at work on layouts large and small. It is, therefore, our intention to present later this year a special overseas number featuring some of the work of keen modellers in these countries, who have to contend with difficulties that few of us at home realize exist. Needless to say, this is not the only special feature we shall be presenting in volume seven ; we have, in fact, many exciting articles on our files for your delectation.

Finally, we remind established readers that we can now accept sets of parts for binding. Full details of this service were given last month, but we take this opportunity to stress the need for sending your copies without delay.

COVER PICTURE

King William III approaches Charmans Bridge Junction on Ken Northwood's N. Devonshire Railway. In this issue Ken describes how he has added detail to this popular locomotive.

Photo: David Kelso



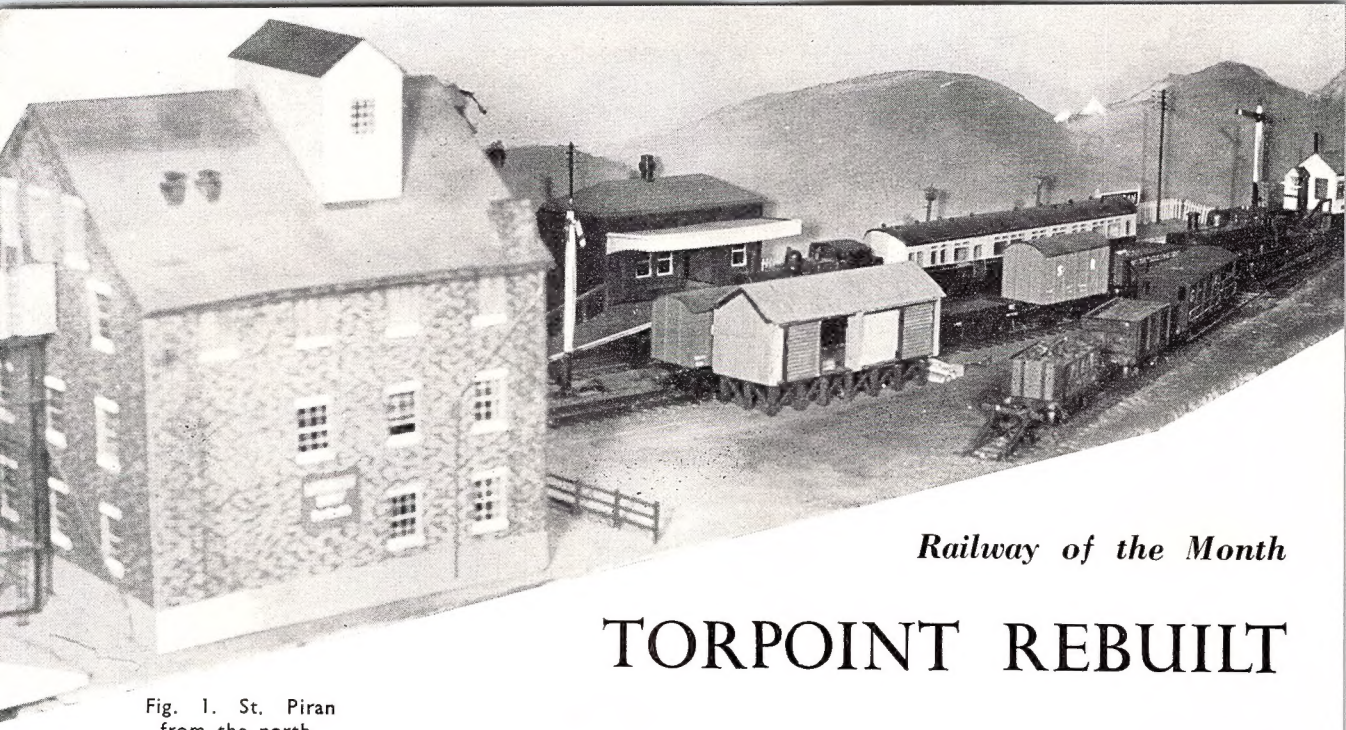


Fig. 1. St. Piran from the north.

Railway of the Month

TORPOINT REBUILT

THE Torpoint Branch of the Great Western Railway has passed through many vicissitudes and several different track layouts since it last appeared in these pages, in May 1952. The present layout has been in service for some eighteen months. It is quite simple but has given a great deal of operating pleasure. The management, having spent a good few happy hours exploring the more remote outposts of the G.W.R. (or Western Region, if you prefer—we don't), has no particular yearning to install "Kings" and "Castles" and suchlike until it acquires sufficient room to build a large continuous layout where they can be given their heads. The prospect of this is remote, and even if it ever matures the chances are that we shall leave the main line to its own devices most of the time and spend our leisure hours on the little rural branch with its one-coach passenger train and solitary daily goods. It is all a matter of taste.

One result of all the chopping and changing is that the present track has been ripped up and relaid so many times as to be well past its prime. By dint of continual maintenance it serves well enough, but this sort of thing can be wearying and the management is saving its pennies to buy new track as soon as may be. The existing is chiefly Pecoway, some of which has been relaid on K's bases. The points are mostly Gem type, with some Peco. The latter will be standard in future, as although the others are satisfactory in themselves the thicker sleepers prevent them lining up with plain track without much packing and general fiddling around. There is also, as will be seen, a single slip built of F.B. rail on a K's base from a design by Reg Evans of Bristol. This was installed to save space, but it is a complication I would avoid from choice, as it gives the stock a rather bumpy ride, although it is only fair to lay this fault on the builder and not the designer. All track is laid on Plimberite chipboard with K's sponge rubber roadbed.

Torpoint, like Newquay, has two connections to the main line, which join at Nine Maidens junction, just north of St. Piran. This is the excuse for having two passenger trains, one a two-coach B set and the other an auto-trailer or two in charge of our littlest child, 1420. The latter combination, incidentally, engine and trailer(s), is commonly known in the deep west as "the car," e.g. "Don't worry about your luggage, my dear. It'll be here on the next car."

Apart from the Exley B set and two Ratio trailers, there is an Exley Southern corridor brake/third which arrives from Waterloo and departs therefor by devious means in true Little Muckspreading fashion. Some of the dozen-odd goods and van stock appear in the pictures. It is rather a motley collection but probably none the worse for that.

In the 1952 article I mentioned something of how Jack and I built 1420, the 0-4-2 auto-engine. She nearly broke my heart before I got her in proper running order, but finally wound up with a K's motor and is now a fine little performer and looks quite smart. The other two locos are also fitted with K's motors: 5711 (the pannier—a good old faithful) and, an extravagance I have never regretted, 4561 (the big engine—a hand-made small "Prairie" from Mr. S. F. Ryan of Bristol). The picture of this one will speak for itself.

The pannier and "Prairie" are fitted with flywheels, but 1420, to get her round the curves, has a free-swinging rear truck concealed by the outside rear frames, and her weight has to be kept forward for adhesion. Driving these flywheel-fitted engines needs a bit of practice; 4561 in particular rolls slowly to a stop, ploughing ponderously through anything that may be in the way.

The steam railcar I built, and which I described in the RAILWAY MODELLER, now serves Reg Evans's Marston Magna Branch, and the "Mogul" belongs to Jack. It needs boiler bands and the abolition of those bow-legged connecting rods, but is otherwise

by John Harrison

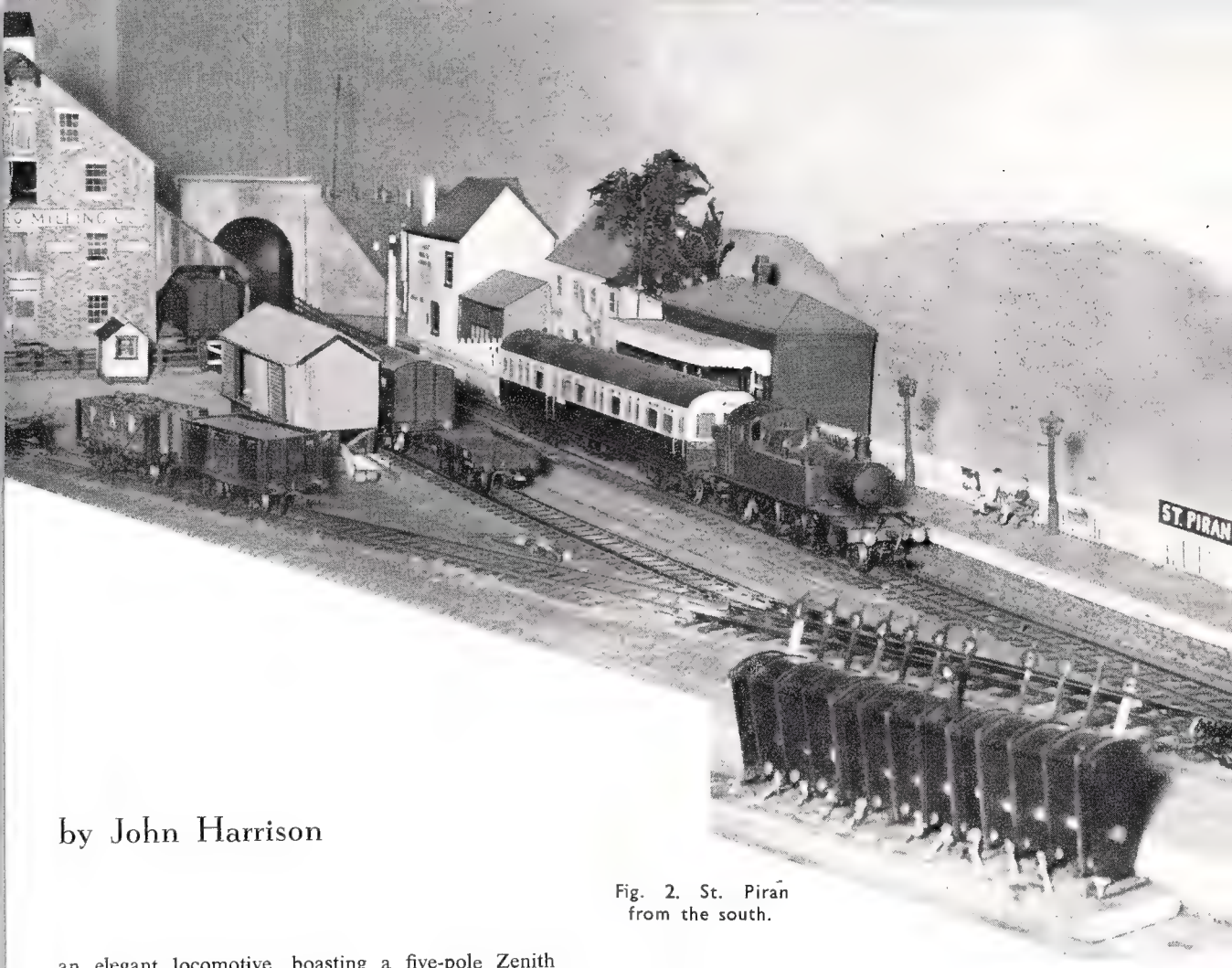


Fig. 2. St. Piran from the south.

an elegant locomotive, boasting a five-pole Zenith motor and complete cab fittings.

In one of the photographs can be seen the Gem 12-lever frame which controls signals and points at St. Piran, also the two points on the far side of St. Piran bridge, which last is the end of the scenery. Mercontrol is the operating agency, and has proved entirely serviceable and satisfactory. The signals are Scalesig and aspects are repeated on a track diagram on the wall with red and green lights for signals and white for points.

A similar system was going to be applied to Torpoint, but in view of impending developments this has been shelved and hand levers remain.

Perhaps a few comments on the photographs would round off this account.

Fig. 1 shows St. Piran at a busy time, with the mid-morning car from Torpoint to St. Piran, Nine Maidens halt, Menwinnion, Wheal Daniell, St. Hilary and Gwinear Road passing the goods, which has moved out of the way in the middle of sorting out pick-ups and deliveries. The station building will be recognized as Tri-ang, but the colours have been toned down. It is not at all a bad facsimile of the sort of small red-brick building the Great Western built during the early 1900s. The goods shed is painted grey, corrugated copper on a wooden platform. The background I am not over proud of, but accept it as one degree better than a distempered wall.

Fig. 2 is another view of St. Piran, taken when 1420 was in for boiler wash and the car was in charge of 4561. Not being auto-fitted, she has to run around the trailer at the end of each trip, which does not please the staff much. Oblivious of the down starter (lever 8) being off, driver Trewhella is striking a "Cornish Riveria" attitude for the benefit of the lady sharing the platform seat. A shadowy figure behind the train is the St. Piran porter, making a few pointed comments about old Bill swanking with the big engine. From the far platform ramp a path leads past the cottage of H. Luscombe and Son, builders and decorators, to the road which ends outside the Trevithick Arms (Starkey, Knight and Ford Ltd.). The gable end of the pub is tile-hung, but being white-washed the fact is not evident in the photograph. The large building to the left is the Mifflinburg mill, from an article by George (Tuxedo Junction) Allen in the *Model Railroader* some time ago. With a name like that I know it has no business in Cornwall, but grant me one anchronism. It is a handsome building and took thirty-eight hours to make. I am sorry that the shadows of the platform lamps are falling on Nine Maidens Down. The baseboard edging is pretty rough and has been cut out of the picture. It is newly installed, being a relic of redecorating the staircase, which is another story altogether.

Fig. 3. The town basin, Torpoint.

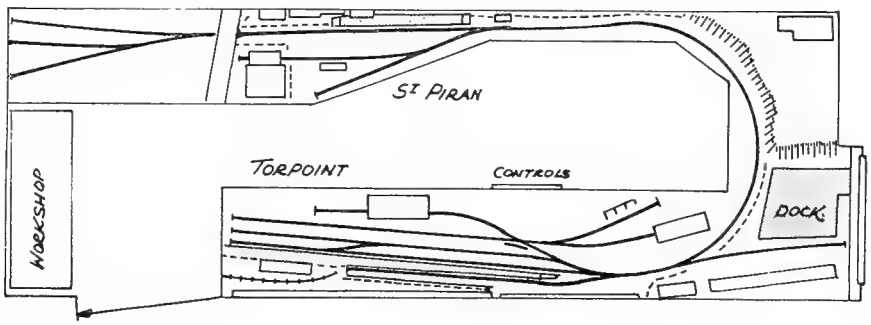
Fig. 3 is a view of the town basin at Torpoint, with the main line in the foreground. Next door to the Falmouth Packet is the newly spruced-up establishment of Wake and Pengelly, then the building accommodating the customs and the harbourmaster, who is also Lloyd's agent. This one is due for some stone facing to relieve all that brickwork. On the corner of the block are the office and warehouse of the Lyonesse Steamship Company. Acknowledgments for this, also, to George Allen. The original is a roofing and awning store in Newburgh, New York. Just out of sight is the Sailor's Return and in the basin lies the pride of the Lyonesse fleet, which, one suspects, offers but scant competition to the railway. Any credit due for her should go to Jack, who understands all about shipbuilding, and any criticism to me for messing about with his designs. She is necessarily foreshortened to fit the basin. The gentleman with his face in a pint pot is the second engineer.

These buildings have interior lights and a dim oil-lamp glow issues from the ship. Red and green pea lamps mark the basin entrance and it all looks rather pretty at night.

Fig. 4 shows a train standing at Torpoint, headed by Jack's "Mogul." In the foreground are the single slip and part of the goods shed. The station building is just out of sight—a pity because it's not a bad effort, being wooden planked, a relic of a former "Brunel barn" which was abolished because it blocked the view. It now has a glazed veranda roof. I funked an urban painted backdrop; to the rear is Railway Street, described in the May 1955 RAILWAY MODELLER, and the end of the tramline from Pol Cornick beach. The tram is approximately a Bath Tramways single-decker, made of card and perspex on a dodged-up Acro bogie. The track is scribed in the roadway with a hard pencil and standards are of $\frac{1}{8}$in. brass rod, painted green. I had better confess, in case it shows, that the front destination board of the car reads "Desire." The rear one, more soberly, indicates "G.W.R. Station."

By the time this appears in print I hope to have the baseboards rebuilt to give more room in our cramped quarters, and the new track laid. Old mistakes will be replaced by new ones, and the net result should be an improvement. There is a distant dream of a 44XX tank and a "Bulldog" ("Tre, Pol and Pen," of course) but old friends will remain, and no fancy diesel is ever likely to displace the car.

Unfortunately there will not be room for stations to serve all those places with beautiful Cornish names (all genuine incidentally), but a corner is earmarked for St. Piran. After all, he was, by repute, the first of the "wave of saints" to reach Cornwall, having allegedly floated over from Ireland on a millstone. I once facetiously remarked that today he might find it quicker by rail, but Jack looked around reflectively for a moment and said no, he thought not.



Plan of the Torpoint Branch (not to scale). Room approximately 14ft. x 5ft. Comparison with the original plan on page 98 of the May 1952 "Railway Modeller" will show that the layout is completely revised, Torpoint and St. Piran having changed places!

Fig. 4. Torpoint station. Note the streetcar named " Desire."

For spring-drive enthusiasts

TRACK LUBRICATION

by " Birkonian "

THOSE who have remained faithful to spring drive —and there must be very many railways where springs are still the motive power—are always searching for a means of ensuring a longer run with a heavier train, applying themselves particularly to finding a means of reducing friction on curves, which acts as a powerful brake.

For many years I played about with several means of improving running, such as oiling stock freely, which was merely messy, sandpapering the track, which removed its tinning and doubled its rusting properties, and even fitting rubber bands on the drivers, but all in vain. However, I have at last solved this problem, and in a very simple manner. It just struck me that an ordinary carpenter's pencil was an ideal and almost grease-free lubricant, easily washed off the hands and comparatively clean in use.

Having removed the wood from round the lead so that an oblong chunk of lead protruded, I ran the pencil over a section of track under pressure so that it " seated " itself and made the job very much easier. The results were very satisfactory.

A small Drummond 0-4-4 tank which normally hauls five six-wheel coaches just on ninety feet got away very freely and came into the home stretch accelerating rapidly round a curve of three feet radius, having already run some sixty feet, and had to be stopped at the terminus, into which it usually crawls and halts from sheer inertia.

On a bank of one in sixty some thirty feet long several locos pulled their usual loads and an extra coach at considerably faster speeds than they had ever moved up the bank before.

In general, on graphite-lubricated track locos are pulling twenty to twenty-five per cent more weight more easily than they have ever done before, and free running is especially noticeable on curves.

This means of lubricating track has many minor advantages. Apart from putting a grease-free lubricant on to the top and inner surface of the track, once the lead has dug a groove in itself the greasing can be done very quickly, like running a pencil along a ruler. I have reached the stage where I can now clean nearly 500 feet of track inside fifteen minutes, and it stays clean for a long time. The process therefore does not need to be repeated often, and while it is being done the lead is chiselling off the track the peculiar rusty film which tends to build up on track, leaving a gleaming surface just like the real thing. The lead is not wide enough to come in contact with check rails, which an oily rag or emery cloth always did, nor does it probe deep enough to damage or strike the chairs. It does not appear to be detrimental to the wheels of stock ; rather the reverse, in that it stops them collecting the rusty fungus which many acquire so easily, and graphite is in itself a first-class preventive of rust. I have carried out my own experiments for more than three months, and the results have fully justified my hopes of greatly improved running. In conclusion, carpenters' pencils can be bought very reasonably at any stationer's.

KING FARISH

OR ADDING DETAIL TO A GRAHAM FARISH KING

by Ken Northwood

Photos by David Kelso

Part 1. The Body

While this article deals mainly with the Graham Farish "King," the principles can be applied to other cast bodies.

MATERIALS REQUIRED

26 gauge nickel-silver wire
24 gauge ditto.
4 doz. 10 B.A. brass bolts
2 doz. 12 B.A. ditto.
Small piece nickel-silver sheet, .01in. thick.
Ditto, 1/32in. thick
Small piece brass sheet, 20 s.w.g.
6in. of 1/16in. nickel-silver strip
"King" chimney
"King" safety valve
"King" nameplates
"King" numberplates to correspond
Two whistles
Roche drawing W/L/10
Photos of "Kings"
Flux
Solder
3in. brass or copper wire, 12 gauge, for steam pipes
2in. brass wire, about 20 gauge, for holding steps
5-amp. fuse wire
Four Romford bogie wheels
Two Insulaxles
*Small piece of rubber tubing (motor drive)
*New motor for tender

*Optional

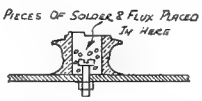
TOOLS REQUIRED

Wire-cutting pliers
Small pliers
Small screwdriver
Assorted shapes needle files about 6in.
Rough and fine flat files about 6in.
10 B.A. tap
12 B.A. tap
Vice
Pin chuck
Twist drills:
No. 51 (10 B.A. clearance)
No. 54 (10 B.A. tapping)
No. 55 (12 B.A. clearance)
No. 62 (12 B.A. tapping)
Hand drill
Soldering iron with slender bit
Hammer
Eclipse saw and blade
Scraper for removing surplus solder (old penknife?)
Fine emery cloth
Tinman's snips (small)

THE North Devonshire Railway has had on its stock book for three years a Graham Farish 6000 Class loco—"King John." A great objection has always been taken to the jerky starting of the G.F. motor, so it was decided to replace this by a Pitman DC71 and slightly modify the gearing, but when this was done the performance was so revolutionized and satisfactory that it was agreed that the model should be made more presentable and less toy-like in appearance. The accompanying photographs show "King William III" as he now is. It is thought that other people may like to carry out such improvements in a similar manner on their own G.F. "Kings." It is not intended to describe immediately the method of remotorizing the model, as that part is mechanical, but we will begin by concentrating on the detail improvements to the loco casting. An attempt will be made to describe how the job was done in such a manner that a beginner could do it.

First, the original body was removed from the chassis and compared with a Roche drawing of the "King" Class, together with various photographs which were to hand. Apart from the fittings (or lack of same) the only glaring differences were (1) the shape of the firebox and (2) the shape of the trailing edge outline of the cab roof. The first item has been left alone, as it was considered too big a job to alter; but it has since been realized that the top of the firebox could have been filed to a better outline (more rounded) and the boiler band filed away in the process could have been replaced by a new brass one.

The chimney, safety valve, whistles, outside steam pipes, hand-rails and name-plates were all stripped from the casting. In our case the boiler mountings were replaced by new ones turned on our own little lathe, but there is no reason why more accurate ones than the original should not be purchased from a reputable trade concern. Do not be put off with an inferior chimney, as this item is probably the most outstanding characteristic in any model. After pulling off the copper band the chimney was filed down to the smokebox, taking care to leave any rivet heads still intact on the casting nearby. The smoke box was drilled and tapped 10 B.A. and a brass bolt of this size inserted and locked with a nut inside. The new chimney was placed in position over this and some flux and solder placed inside it. A little gentle heat from a Bunsen burner was applied outside the chimney until the solder melted (sketch 1). On cooling the



Sketch 1.
Section showing chimney fixing.

solder fixed the chimney to the brass bolt head. As the loco casting will not take solder itself, all fittings have to be fixed by means of B.A. bolts either directly or by soldering thereto.

While on the subject of soldering it is well to mention that I used a 75-watt soldering iron with a slender diamond-pointed bit for nearly all the work on this loco. By itself this gave insufficient heat for good joints when they were near the body casting, as the latter conducted too much heat away; so I had a gas burner (in my case a Bunsen connected to one of the jets of the kitchen stove) to warm up the job a little and also play on the bit of the iron for a few seconds just before making the joint. I found this preferable to using a heavier iron, which was, by virtue of its weight, clumsier. Provided the burner is not used too much the iron will not get hot enough

This three-quarter front view of King William III shows how a few small details can improve a standard body.

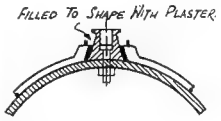
to damage the element inside it. My own iron is several years old and seems to thrive on such treatment.

The safety valve was next tackled. The Graham Farish (copper) cap was removed and the centre spigot was filed away down to the boiler level, leaving the top feeds more or less intact. A small three-cornered file was necessary for this purpose so that

Sketch 2.

Section showing extent of removal of safety valve.

the feeds could be undercut as shown on sketch 2. The new brass cover was fixed by means of a 12 B.A. bolt through a hole drilled and tapped through the boiler. A little plaster of paris was used for making up the top fillers to the correct shape, and that was where the undercut was useful in giving the material a firm hold when set (sketch 3). After painting, this material is indistinguishable from metal. I think Alabastine, or maybe even wood filler, would be just as satisfactory.

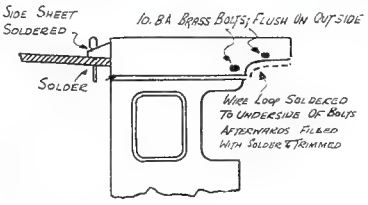


Sketch 3.

Fixing of new brass safety valve.

The holes in the top of the firebox for the two grossly overscale and ugly G.F. whistles were plugged and two small holes of the correct size for the new whistles were drilled in the correct places. Two whistles (one smaller than the other) were inserted and soldered on the inside. The two triangular side sheets were cut from thin nickel silver (or brass) and soldered to the whistles and stuck with Durofix to the cab front as an added strengthening measure.

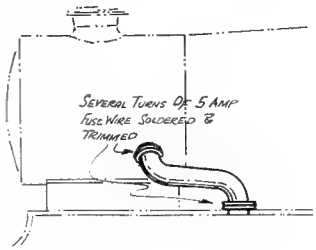
In order to make the outline of the rear of the cab roof more accurate two 10 B.A. tapped holes were made through the roof on each side as shown in sketch 4. The brass bolts were put in these and filed flush with the roof on the outside (beware of removing rivet heads!) but left projecting about 1/10in. on


Side Sheet Soldered
10. B.A. Brass Bolts; Flush On Outside
Solder
Wire Loop Soldered To Underside Of Bolts Afterwards Filled With Solder & Trimmed

Sketch 4.

the inside. Nickel silver 24 gauge wire was soldered to these and looped out roughly to the shape of the edge of the roof required. The space between this wire and the existing roof was filled with solder and filed and scraped to an even finish. After painting black it is impossible to see without the closest scrutiny that the roof has had to be altered. I see no reason why wood filler or any other substance which will set hard could not be used instead of solder as a filler.

The original outside steam pipes were too slim and "wiry" in appearance, but the holes in the casting to take them were near enough in the correct positions. Two pieces of 12 s.w.g. brass (copper would have worked easier) were obtained and bent to the correct shape. This is not as easy as it sounds, but one has to be prepared to spend a little time on this job, as badly shaped "swan necks" detract from the finished model very greatly. Careful note was taken of the front view as well as the side view of these pipes when bending. After inserting the ends of the wires into the holes in the casting a few turns of 5-amp. fuse wire were wrapped round each end. Solder was run round these wires (sketch 5) and

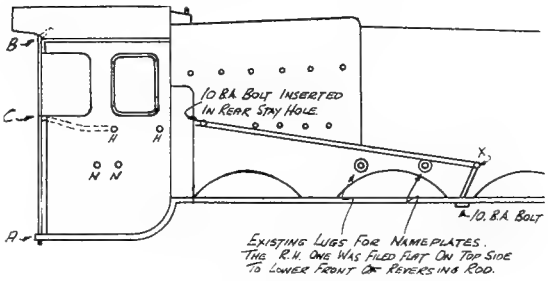


Sketch 5.

when trimmed with file, scraper and emery cloth they made a fair representation of the flange covers or whatever the swellings are on the prototype.

The reversing rod was put into position on the right-hand side before the name-plates were fixed, as it passes behind the latter. Two pieces of $\frac{1}{16}$in. nickel-silver strip were used for this, but first one of the stay holes in the firebox was tapped 10 B.A. and a brass bolt inserted (head cut off). Another 10 B.A. bolt was put through the footplate as in sketch 6. The nickel-silver strips were then soldered to these and soldered together at "X."

The name-plates used were obtained as photo-



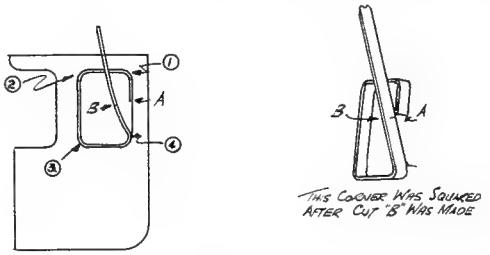
Sketch 6.

engraved brass sheets and had to be trimmed to the exact outline. When this was done they were tried in position and fitted snugly to the splasher outline. The two lugs on each side were tapped 10 B.A. part way through and brass pins threaded in till tight and filed flush on the outside. These pins were then tinned with solder, as also were the backs of the name-plates. The latter were then placed in position with the loco on its side (on a pad of rag or soft material). The iron was cleaned of solder, given a little extra heat in the burner and then pressed on the face of each nameplate in turn. A little whiff of heat from the Bunsen helped to get proper sweated joints where the tinned back of the plate contacted the tinned bolts. This was done by holding the burner in the left hand and passing the flame over the nameplate backwards and forwards quickly. It was surprising how soon the job was done even with a small flame, and care must be taken, if this method is used, not to overdo the heat, as other soldered joints nearby may be melted.

The embossed figures 6000 on the cab sides were filed and rubbed down with emery cloth and two 10 B.A. holes made in each cab side in the positions shown ("N," sketch 6). Short 10 B.A. brass pins were inserted from inside the cab and left flush with the outside. They were tinned and the number plates here soldered to them by the same method used for the nameplates. These have to be dead level, otherwise they look very bad, so it is worth a little trouble to get them right. Unsolder them and refix them if they are not properly horizontal the first time.

The hand-irons immediately beneath the cab windows were then put on. Two holes were drilled and tapped 12 B.A. in the positions shown on sketch 6, "H," 12 B.A. brass bolts were inserted from inside and these were left projecting from the cab side about $\frac{1}{32}$in. Nickel silver No. 26 gauge wire was soldered to these, leaving a fairly large "blob" of solder on each. I found that it helped to solder one end of about 6in. of the wire to one of the bolts first and this enabled me to hold the surplus length in position over the second one for soldering. The surplus wire was then "nicked" with a triangular needle file as near to the solder as possible and broken off. The solder "blobs" were then trimmed with a file to represent the hand-rail knobs.

The brass beading round the cab side-windows caused a few headaches while puzzling how to do it, but I feel it was well worth the study, as the job took less time to carry out than to plan. The windows were first enlarged by filing so that they were as large as the outside dimensions of the beading shown on the Roche drawing. A strip of 20 s.w.g.



Sketch 7.

brass was made $\frac{1}{8}$in. wide and about 8in. long (more than enough for the two windows). This was bent by pliers into the shape of each window after first seeing that end "A" was dead square (sketch 7). The corners were bent to a right angle with a small radius; the brass was tried in the window opening after each bending and the next corner was marked off in turn and then bent. The last corner was bent slightly askew so that the position of the necessary cut "B" (sketch 7) could be located. This cut was made and trimmed and the brass squared up so that the ends butted together. When tried into the window opening a little filing on the outside periphery was necessary to force the brass in. After this was done the brass was soldered inside the cab to the heads of the projecting brass pins which had been used for the cab side hand-rails.

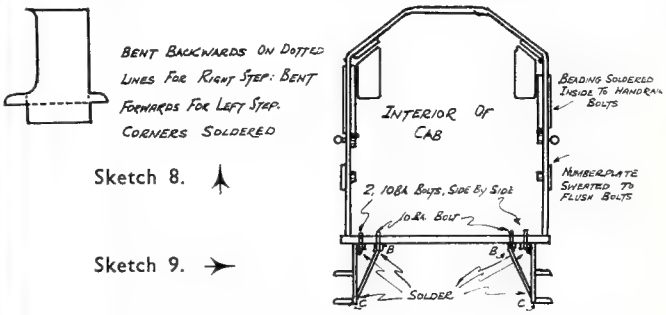
The brass was then trimmed with needle files on the inside periphery to make it thinner and straighter on the visible edge. This edge was left projecting from cab side about $\frac{1}{4}$mm. The butt joint on the brass was practically invisible on the model after it was finally polished with fine emery cloth.

The final items on the cab itself were the two vertical hand-irons on each trailing edge. A very small hole was drilled through the footplate on each side as shown at "A" in sketch 6. A piece of nickel-silver 26g. wire was pushed through this hole, bent under the cab roof at the top ("B") and soldered to the pins already in the roof for the extension described above. In addition, another piece of wire was soldered at "C" and extended to the heads of the pins inside the cab which hold the side hand-irons.

The steps to the cab were made from ·01in. brass or nickel-silver sheet cut to the shape shown in sketch 8 but to the size on the Roche drawing. This was then bent at the dotted lines to form the bottom step and the back was tinned at the top and bottom. The footplate inside the cab was drilled and tapped 10 B.A. in three places for each step as shown in sketch 9 and three short bolts were put through with heads on the underside. The top of the steps was

first soldered to the two bolt-heads while it was held in the correct position (either with the aid of a wooden jig or with pliers) while the loco body was upside down—I used the latter simpler method. A piece of brass wire (20 s.w.g. approximately) was soldered between the other bolt-head " B " and bottom of step " C " after first making sure that the step was absolutely vertical. This wire is for obvious strengthening purposes.

The original Graham Farish buffer-heads were removed by pulling with pliers and the buffer stocks were filed to a taper (this had to be done carefully and could not be carried on to such a taper as shown on the Roche drawing, as the internal hole is too large. A big improvement was made, however,

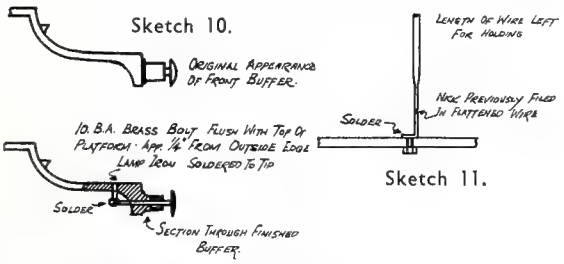

Bent Backwards On Dotted Lines For Right Step: Bent Forwards For Left Step. Corners Soldered
Sketch 8.
Sketch 9.
Interior Of Cab
Beading Soldered Inside To Handrail Bolts
Numberplate Sweated To Flush Bolts
2, 10BA Bolts, Side By Side
10 B.A. Bolt
Solder

and the square base thus left is correct to prototype. The hole in each buffer-stock was then drilled right through the buffer-beam.

Three 10 B.A. brass bolts were put through the platform immediately behind the buffer-beam with the heads underneath and in the position of the three lamp-irons. The tops were filed nearly flush with the platform. Two of E. R. Gray's spring wagon buffer-heads were inserted through the buffer-stocks and soldered to the heads of the two outside bolts (sketch 10).

A slot was cut in the middle of the buffer-beam and a three-link coupling hook pushed through it and soldered to the head of the centre bolt. The vacuum pipe was also soldered to the head of this bolt. I made my own pipe by wrapping fuse wire round some copper wire of the correct thickness and soldering the ends, but a commercial product makes just as good a job. A small length of nickel silver 26g. wire was also soldered under the left-hand bolt and brought forward under the buffer-beam to form the hook for the loose end of the coupling to be anchored to when the loco is not coupled to anything at the front.

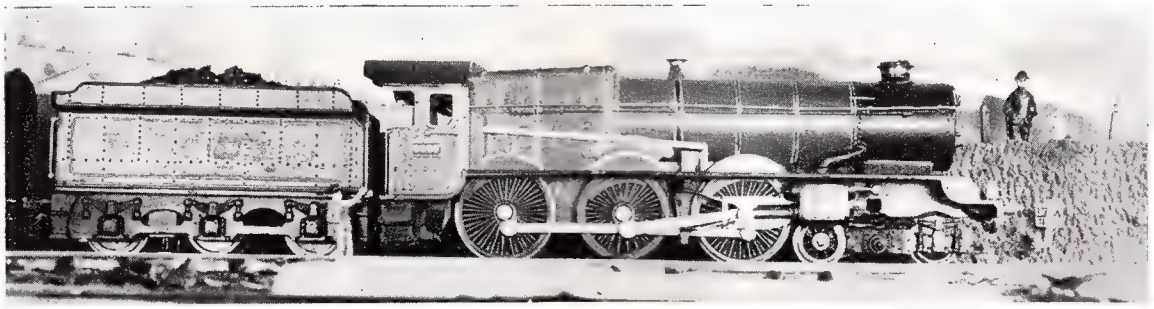
The lamp-irons were made from 26g. nickel silver wire flattened with a few light blows with a hammer while laying the wire on a hard, smooth surface. This flat wire was then bent at right angles for the last $\frac{1}{8}$in. and a nick was filed about half-way through where shown in sketch 11. The first $\frac{1}{8}$in. was soldered to the brass bolt previously inserted in the platform (the extra heat of the gas flame was invaluable here), while the remainder of the wire was used for holding it in position. When a firm joint was satisfactorily made the surplus wire was bent backwards and forwards and it readily broke off at the nick. The solder and the top of the lamp-irons were trimmed with small scrapers and files. This method was used for the other lamp-irons on the side for the spare lamps and the one on the smoke-box door. The latter, of course, was bent to the special shape before soldering.


Sketch 10.
Original Appearance Of Front Buffer.
10. B.A. Brass Bolt Flush With Top Of Platform · App. ¼" From Outside Edge
Lamp Iron Soldered To Tip
Solder
Section Through Finished Buffer.
Length Of Wire Left For Holding
Nick Previously Filed In Flattened Wire
Solder
Sketch 11.

The existing holes in the boiler, smoke-box and firebox from which the Graham Farish hand-rail knobs were extracted were then tapped 10 B.A. and small pieces of brass bolts (no heads outside) of this size were inserted and left sticking out sufficiently to act as new hand-rail knobs. An extra hole and bolt were put in the top centre of the front of the smoke-box both because the prototype has a knob there and to give added strength to the more true-to-scale hand-rail. No. 26 s.w.g. nickel-silver wire was bent carefully to the necessary shape of the hand-rail, leaving sufficient length to make it project through the spectacle-plate holes into the cab. This was then soldered to the newly inserted bolts, working from the front to the back and checking each joint as made for the maintenance of a reasonably level hand-rail. The soldered joints were made with large " blobs " and duly scraped and filed to a respectable size to represent the knobs.

The step on the front of the smoke-box was bent from a small strip of nickel silver and soldered to a bolt in the same way as the lamp-iron. The small valve on the front right-hand side was represented by a 12 B.A. bolt with the head cut off. The threads were partly filed away after tightening and when painted are virtually invisible.

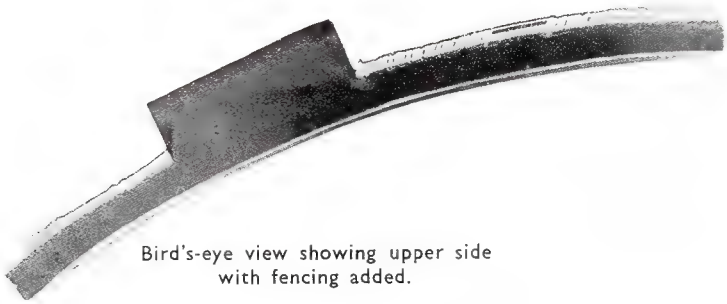
(To be concluded)



Do It Yourself !

No. 1

CURVED



Bird's-eye view showing upper side with fencing added.

PLATFORMS on curves are a nuisance to make, and may be unsightly nuisances when made, but they are sometimes unavoidable. Straight track is not always available in sufficient length just where it is wanted, and there is a lot to be said for putting a station in the corner of a room, where the station buildings can be tucked away in what would otherwise be waste space. However, the construction need not be such a headache if it is tackled in the right way, and something can be done to disguise the worst features of the finished article. The little halt platform to be described was incorporated in the writer's layout to serve Cotsford village until such time as a permanent station was built nearby, and there was only one place for it, where the track was on a three-foot-radius curve. There was no escaping it, so the problem had to be faced and solved.

There are two bad features about curved platforms, the fact that the curve is unrealistically sharp and the clearance which is necessary to get long locos and coaches past without fouling the platform edge. The first can be screened to some extent by features in front of the platform, and by putting it so that it is not normally seen end-on. The second is largely screened if the platform is on the far side of the line, as the coaches themselves hide the gap. Both defects are less readily seen if the track level is higher, so that one looks at the side of the train instead of looking down on it.

Any platform may be built up from the baseboard, the actual platform surface being laid on the supports

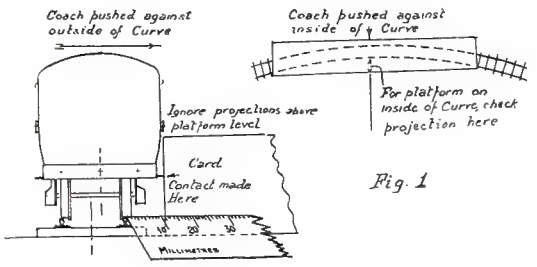

Coach pushed against outside of Curve
Coach pushed against inside of Curve
Ignore projections above platform level
For platform on inside of Curve, check projection here
Card
Contact made Here
Millimetres

Fig. 1

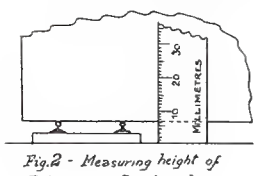


Fig. 2 - Measuring height of Rail above Baseboard

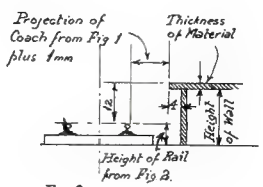


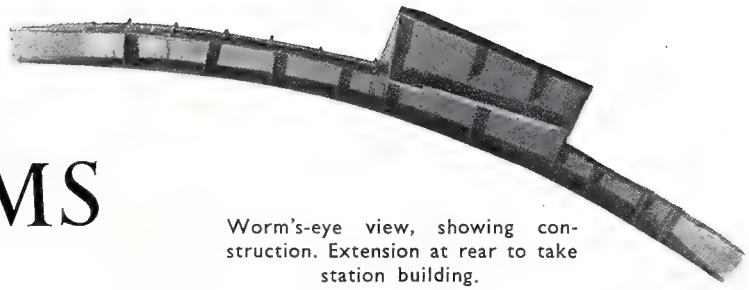
Fig. 3.

last of all, or the whole assembly may be built up as a unit and laid in place when complete, held down by a screw or two if necessary. The first is easier for a straight platform, but not for a curved one, and the writer prefers the separate unit scheme. The platform is easily used as a cover for point motors or wiring, it can be removed if the layout plan is varied (as this one will be), and it is easier to get the curvature right. The fitting of certain of the details, too, is easier if one has both top and bottom to work on while securing them. Finally, if you get in a mess it is easier to throw away !

There are only two materials which need be considered—wood and cardboard. Wood is stronger, and is probably best for straight platforms, but cardboard is much easier to shape correctly to the curve, and if properly treated is quite strong enough (I have just tested mine with all the twelve stone I have available). Ordinary strawboard, such as is used for stiffening envelopes containing large photographs, was actually used for Cotsford, as it was to hand, and it can usually be acquired for nothing. The odds and ends needed are some good tube glue, such as Seccotine, Certofix or Lepage's No. 24, a little office gum, some brick paper if the front wall is brick, paint and shellac varnish. We are not concerned with the station buildings or other details, only with the platform itself.

The way to be sure that things are right is to lay the track first and work from that. Begin by laying a sheet of newspaper on the track and press gently on it so that there is a slight mark where the rail nearest the platform comes. Next take the longest vehicle you are going to use and run it over the track, pressing it towards the platform so that it sticks out as far as possible, and measure the maximum projection as shown in Fig. 1, using a bit of card and marking the spot where the bottom comes. If this mark comes, say, 11mm. from the nearest rail, add on a bit for clearance (1mm. is enough) and put a row of dots on your sheet of newspaper 12mm. from the crease left by the rail. Join up these dots and this will give the curve of the platform edge.

How you transfer the curve to the cardboard does not matter. You can stick the paper to the card and cut them together, cut the paper first and use it as a template to mark the card, or pin it on top and prick through. I prefer the last method, which is clean and quick. The cutting is best done with a single-edged razor blade of the Star or Ever Ready type. These have a metal strip folded over the back and are easier on the fingers than the Valet type which some writers recommend. You may of course have a special cutting tool with a fine tapering end ready to hand. Take a very light cut first, getting



Worm's-eye view, showing construction. Extension at rear to take station building.

PLATFORMS

by P. E. Barnes

this dead on the line, and this will serve as a guide to the later cuts, each a bit deeper than the one before. Whatever you do, don't rush it!

The front and back walls can best be cut to the correct height by measuring from the track rather than by estimation from the coach floor. The standard height of a platform is three feet from rail level, although many older stations are a bit lower. Add the scale equivalent of this height, 12mm., to the height of the rail top above the foundation level, which is easiest got as in the diagram (Fig. 2), and deduct the thickness of the platform top layer (Fig. 3). Cut not only the front and back walls and the tapering pieces for the end ramps, but two or three feet of extra strip this width for strengthening.

The strawboard or card should be free from any half-stuck paper on the surface. Before applying the glue, it is necessary to give the surfaces which are going to come into contact a coat of gum, and let this soak well in, otherwise the strawboard will absorb the glue without giving a good joint. When the gum has dried, coat the surfaces very thinly with the tube glue and bring them together. As soon as they have stuck sufficiently for the job to be rigid, put a flat iron, a telephone directory and any other fairly heavy weights ready to hand on top, so that the joints dry under pressure. The front and back walls should be put on first, noting that in modern practice the front wall is set one foot in from the platform edge, while in older structures this distance may vary, and in some cases, as with the example chosen, the front wall is flush with the edge. When these are stuck and dry, cut some of the remaining strips up into short lengths, so that they are a nice snug fit between the front and back walls, and stick them into place to stiffen up the whole structure (Fig. 4).

Usually, you will have to use three or four bits of card to get the necessary length. These can be joined by butting them together with the edges glued and sticking bits of card on the underside, making sure that they will not get in the way of the front and rear walls. In the interests of strength, it is also advisable to stagger the joints of the walls, so that they do not come opposite one another. If it is thought necessary, these walls may also have the joints reinforced on the back with strips of card.

When the assembly has dried, brick or stone paper can be stuck on the walls to taste. The platform surface can be painted to resemble concrete or asphalt, but it is best to glue a strip of paper on it first to cover up any joints. The best imitation of asphalt I have achieved has been got by painting with a fairly thick glossy enamel, preferably a mixture of white, black and blue, and while it is still a bit tacky sprinkling it with some kitchen scouring powder, rubbing it in lightly and brushing off the excess when the enamel has dried.

The final stage is the impregnation of the whole structure with shellac varnish. This should not be just brushed on, but applied so that it soaks well in. The easiest way to do this is to turn the whole show upside-down, and pour a spoonful or so of varnish into each of the "compartments," swilling it round until the card has absorbed all it can. Then leave to dry flat.

The platform is now complete, and can be flavoured to taste with lamp-posts, signboards, seats and what not. There is, however, one thing to remember—once cardboard has been impregnated with shellac varnish you will not get a good, lasting joint with ordinary glues. It is therefore necessary to use a celluloid cement; although, of course, ordinary adhesives will take quite well on surfaces which have been painted over.

In the case of the station platform illustrated, the need was for a temporary structure which could be removed completely and transferred elsewhere. The complete unit is therefore held down to the baseboard by two screws, which are hidden by the station shelter.

I omitted one advantage of the permanently fixed platform when I was dealing with the relative merits of fixed and temporary structures—it is much easier to blend it into the general scenic picture where such things as access roads and the adjoining country are concerned. A little thought should therefore be given to these points when designing the station. Usually a bit of low cunning will get you out of trouble, by arranging that the awkward joins are concealed behind structures, or by ingeniously sited trees or hedges. After all, in the corner of a room, where the curved platform is often needed, the angle of view is very restricted, and quite a lot of liberties can be taken with what cannot be looked at too closely from the wrong side!

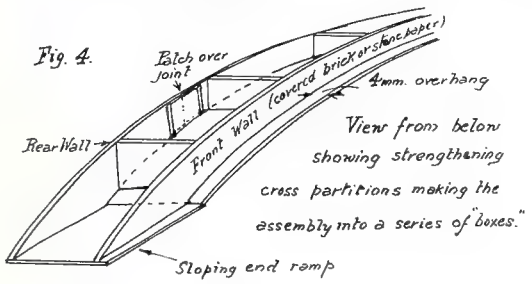
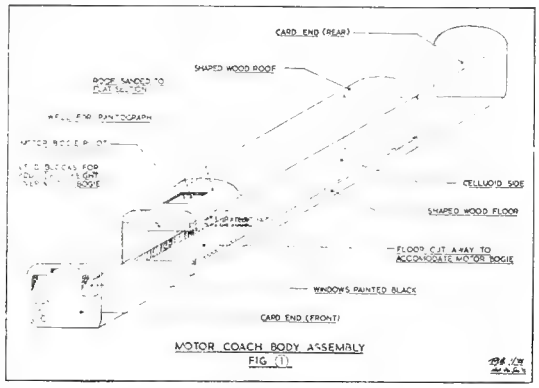


Fig. 4.
Patch over joint
(covered brick or stone paper)
4mm. overhang
Rear Wall
Front Wall
View from below showing strengthening cross partitions making the assembly into a series of "boxes."
Sloping end ramp

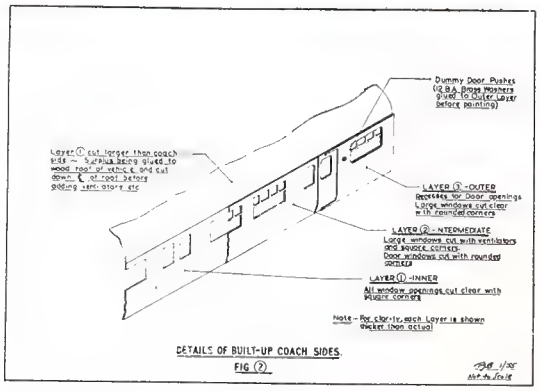
How I built my "OO" gauge

Eastern Region Multiple-unit Stock

by P. J. W. Blackham



MOTOR COACH BODY ASSEMBLY
FIG (1)


Dummy Door Pushes (12 B.A. Brass Washers glued to Outer Layer before painting)
LAYER ① -OUTER
LAYER ② - INTERMEDIATE
LAYER ① -INNER
Note - For clarity, each Layer is shown thicker than actual
DETAILS OF BUILT-UP COACH SIDES.
FIG (2)

THE photographs show a "OO" gauge multiple-unit electric motor coach and driving trailer which I have recently constructed.

The design is based on the E.R. Liverpool Street/Shenfield and Manchester/Glossop stock, but has been modified to shorten the vehicles slightly while endeavouring to retain the characteristics of the prototypes. The vehicles described will negotiate an 18in.-radius curve without difficulty.

Since my layout is at present electrified on the outside-third-rail system the motor coach is provided with alternative methods of current collection, these being either from overhead wire through the pantograph or from outside third-rail by means of the normal type of collector bars on the motor bogie.

The vehicles are fitted with interior lighting, which is diffused by opaque material behind the windows. When operating on two-rail or three-rail track the lighting can be fed from an overhead wire through the pantograph.

The bodies of the vehicles are constructed of wood, card and celluloid, using Hamblings' shaped roof and floor sections and celluloid side strips as for normal litho-sided construction, as shown in Fig. 1.

The sides are built up of three layers of good quality paper as shown in Fig. 2, these sides being glued in position after the wood and card body has been completed.

Referring again to Fig. 2, it will be seen that an extension is left on the first layer, which is glued to the roof when attaching the sides. This ensures a good "hold" of the sides to the body at the top edge, which otherwise would tend to pull away at this point owing to the small area available for gluing.

Using this method of construction, as opposed to normal lithos, I have found it advisable to apply only the undercoat to the completed side (up to roof level only) before attaching to the body—all finishing coats being applied after the entire job is assembled. Any attempt to apply finishing paint or varnish before this assembly will result in the surface tending to crack when the sides are finally formed to the curved lower contour of the body. I should mention that Ratio paints were used on these coaches.

The pantograph is a Marklin production obtained from Taylor and McKenna and the motor coach is powered by a Zenith motor bogie.

Contrast! The driving trailer end, with early four-wheel stock in the background.

Why not go

OUTSIDE THE FENCE?

asks C. Gordon Watford

Photo No. 1. The hilly main street of Tetbury, Glos.

Photo No. 2. A row of old buildings at Newent, near Gloucester.

Photo No. 3. St. Clement's Church, Old Town, Hastings.

SOME modellers believe that scenic modelling should be confined to what would in real life be the property of the railway company, and that beyond the boundary fence the land should be left devoid of any scenic details. Others maintain that scenery is an essential frame to the model railway picture, and, being a supporter of this theory, the author offers here some illustrations of prototype buildings quite unconnected with railways, in the hope that they may induce more modellers to go beyond the limits of the boundary fence with their modelling.

Photo No. 1 shows an excellent way to finish off a corner of the layout. The road climbs into the village, the buildings at the top being painted on a flat background sheet. The buildings on the right could well be modelled in low relief. The individuality of the buildings should be carefully noted, as uniformity is a bad thing in model form. It is for this reason that the author advocates building one's own houses to original designs.

How about a nice row of cottages behind that station? If you have not much room on the baseboard, do not worry; low-relief modelling makes it possible to include a line of these attractive buildings, together with a narrow roadway, in a space no wider than three inches. An example of such an idea is shown in photo No. 2. A useful point to remember is the atmosphere obtained by setting the road on a slight slope.

For the modeller who would prefer a town or village background, photo No. 3 shows the possibilities for a corner of the layout behind the terminal station. The church tower could either be painted on a flat background or modelled in low relief, the latter being preferable. Again, note the attractive appearance of the steeply climbing roadway and the high pavement on the left.

Prototype of the Month

HABROUGH

(ex

by P. E. Gree

← Habrough Junction signal cabin.

HABROUGH station offers the modeller a good deal of scope. The platform layout makes the overall length rather long—about twelve feet would be needed in 4mm. scale—but at the same time it would lend itself to be modelled round two sides of a room.

The prototype is in fact perfectly straight, and is situated about ten miles from Grimsby on the Grimsby—Doncaster main line. At the western end of the station, the double-track New Holland branch runs parallel with the main line for about a mile before turning northwards.

Of typical Manchester, Sheffield and Lincolnshire Railway design, the station buildings are of red brick, with grey slate roofs. The stationmaster's house has stone window frames, and the roof is steeply gabled.

The station facilities include a small coal depot with weighbridge, a cattle dock, an end-loading bay, a small yard crane on a grassed loading bank, and two lots of bulk timber in long-term storage. An unusual feature for a small station is a three-way footbridge, which would make an attractive model.

To the south of the station the scenery is open country, fairly flat with a liberal number of trees. Using this scene as a background, the layout could effectively be modelled to be viewed from the north.

Practically any ex-L.N.E.R. stock could be used.

Cattle dock and loading bank, Habrough.

Present passenger stock includes B1, D11 and K3 tender locos and A5 tank locos, while goods locos include J6, J39, O2, O4 and ex-W.D. 2-8-0. Fish traffic from Grimsby and iron ore trains from Scunthorpe form a fair proportion of the total, fish trains usually being hauled by B1 or K3 locos, often double-headed by any combination of the two.

The unusual footbridge at Habrough. This would provide a fine exercise in soldering, wire mesh forming the latticework.

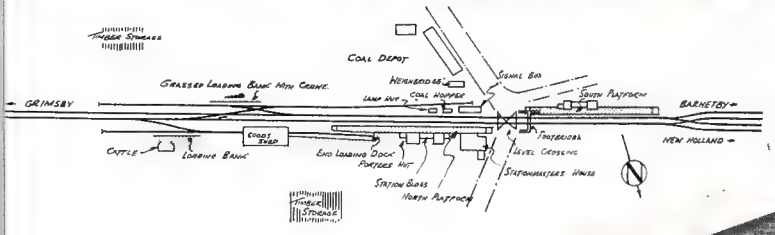
UNCTION

Great Central)

North platform buildings. The station-master's house is nearest the camera.

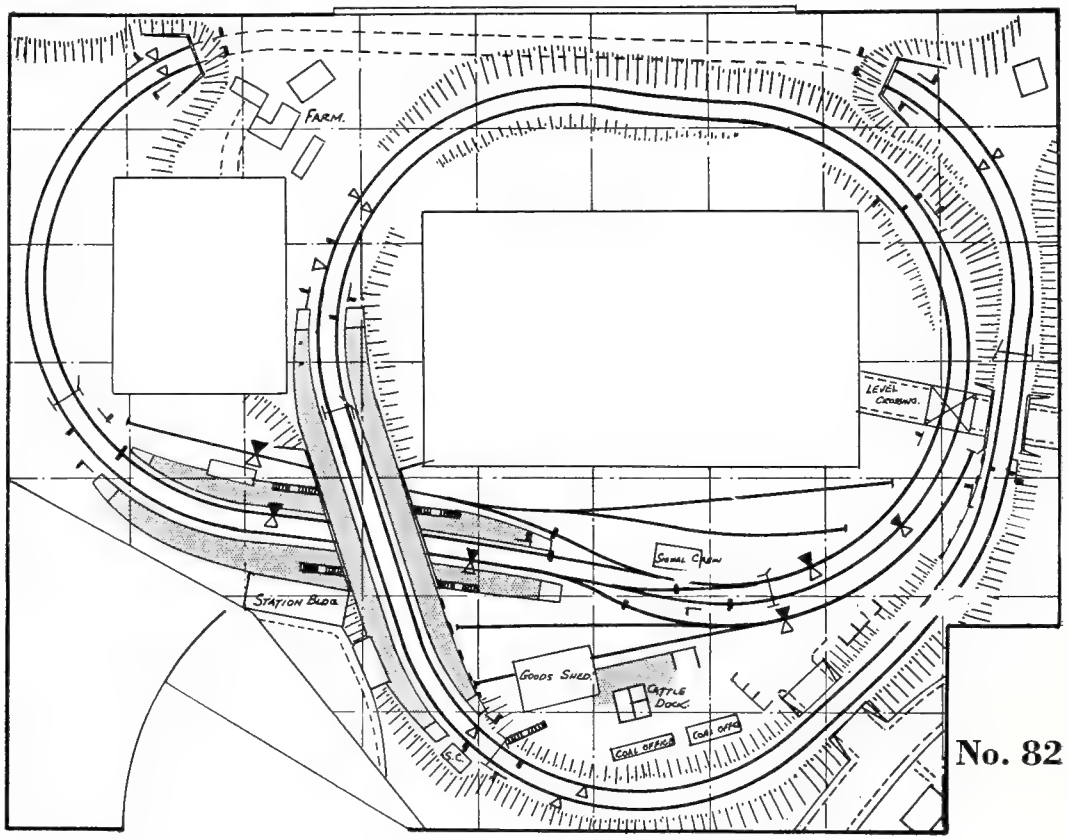
FROM THE FOOTBRIDGE

South platform buildings and shelter.



Sketch plan of Habrough Junction.

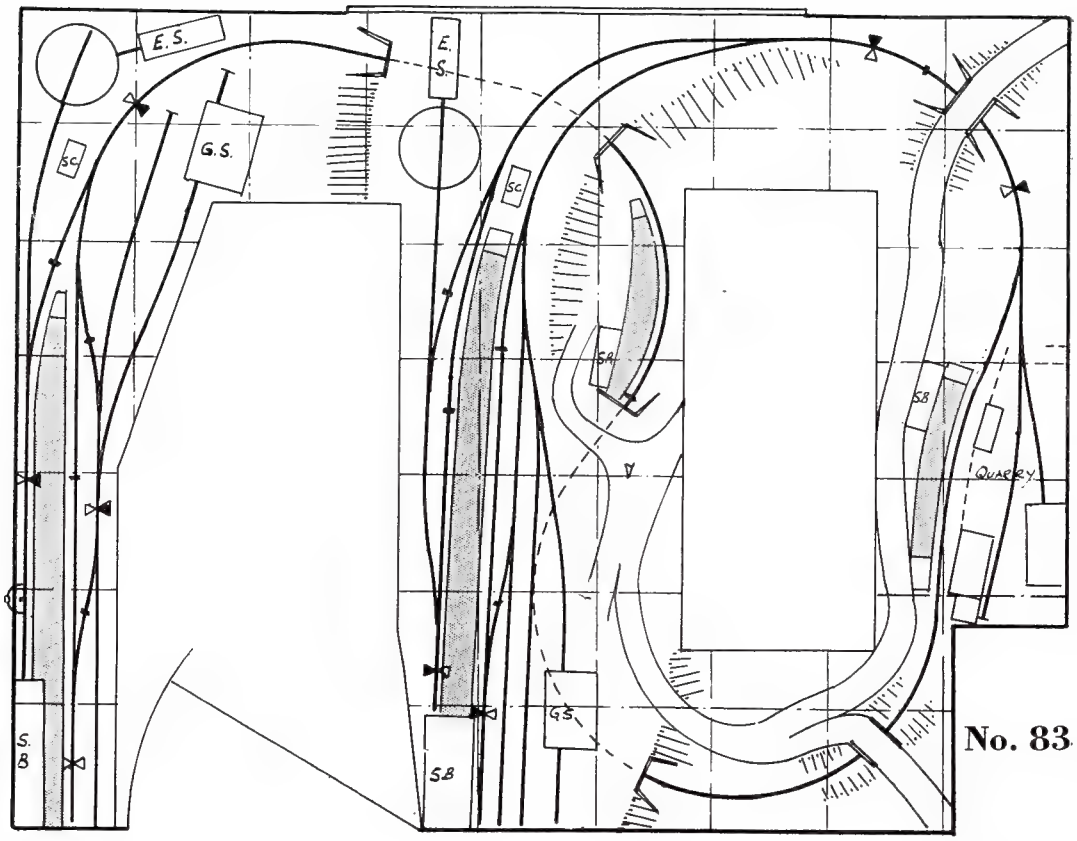
Habrough goods shed. Note crane on right.



No. 82

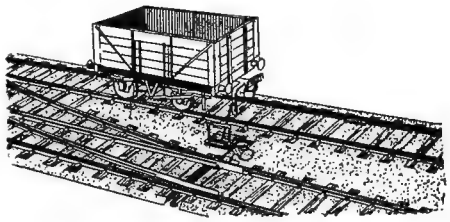
LAYOUTS FOR THE MODELLER

Two contrasting schemes for a 9′ x 7′ room. Each square 12″ x 12″.



No. 83

Peco Topics



FITTING THE PECO-SIMPLEX AUTO-COUPLER

Part 1—Locomotives

FITTING Peco-Simplex auto-coupling to goods and passenger stock is a simple, quick and obvious procedure. However, to new users the fitting of it to locomotives may at first sight seem complex; but this is not the case, and for that reason we are dealing with the subject of locomotives first.

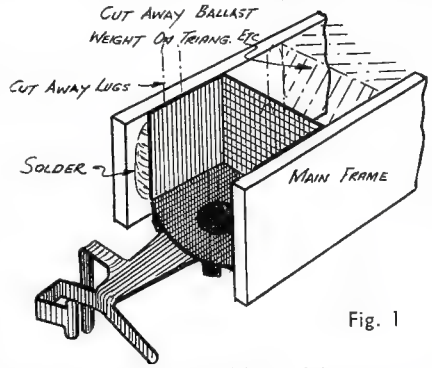


Fig. 1

Although there are a wide variety of locomotive designs, there are fortunately only four basic conditions for fixing the Peco-Simplex Auto-coupler, and all cases can be met by an adaptation of one of the methods about to be described.

First of all it is essential to decide where on the locomotive to locate the coupling. The rule is that where a bogie or pony-truck is used the couplings must go on the truck, but in other cases the coupling must go on the main frames.

Where the main frames are two separate pieces of metal, the mounting bracket may be fixed directly between the frames. Needless to say, the fixing tags should be cut away first, as must any ballast weight between the frames (see Fig. 1), as for example in the case of the popular Tri-ang 0-6-0. If the frames are solid, or for any reason it is not desired to fix the bracket between the frames, the bracket may be flattened out and screwed or soldered to the chassis as shown in Fig. 2. This system of assembly is particularly useful where the screw fixing the chassis to the locomotive is covered by the coupling bracket, as it can then be readily removed for maintenance. As some solid chassis are rather low it may be necessary

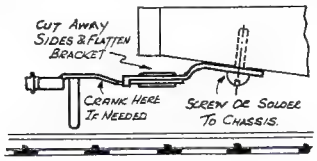


Fig. 2

to crank the coupling hook where indicated to maintain the correct height; furthermore, on certain proprietary locomotives, where a convenient screw is a little too far back to take the flattened coupling bracket, an extension piece of $\frac{1}{8}$in. wide brass may be soldered to the bracket.

Basically, the principle of fitting the coupling to a bogie or pony-truck is identical. The coupling bracket is flattened and soldered to the bogie frame as shown in Figs. 3, 4 and 5, or if the bracket is too short an extension piece should first be soldered to the stretcher. The procedure is similar whether the bogie is inside- or outside-framed, except that it is important to ensure that clearance is left for the wheels in the case of an outside-framed bogie.

When a proprietary locomotive with die-cast bogies of Mazak or similar material is used the coupling cannot be soldered, and so it is usually necessary to fix with a screw or binding wire. However, an alternative has now come to hand in the form of "Mixa-fix" polymer adhesive, which appears to have considerable application in this field. (See review in this month's Trade Window.)

Six-wheeled tenders should have the coupling fixed to the tender floor or frame, whichever is more convenient, while on bogie tenders the coupling is fixed to the bogie as described above.

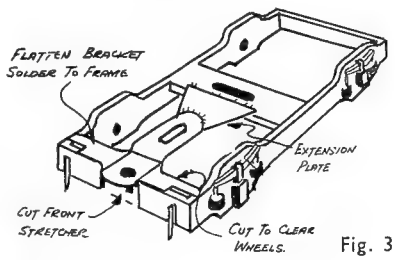


Fig. 3

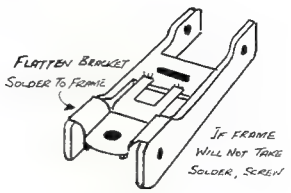


Fig. 4

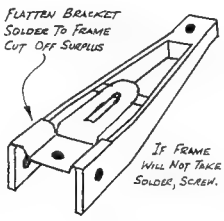
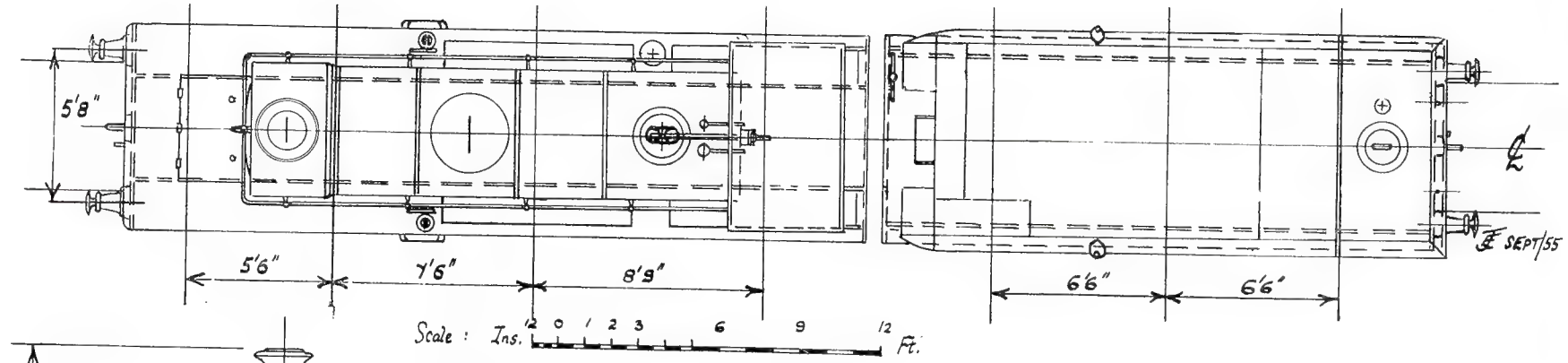
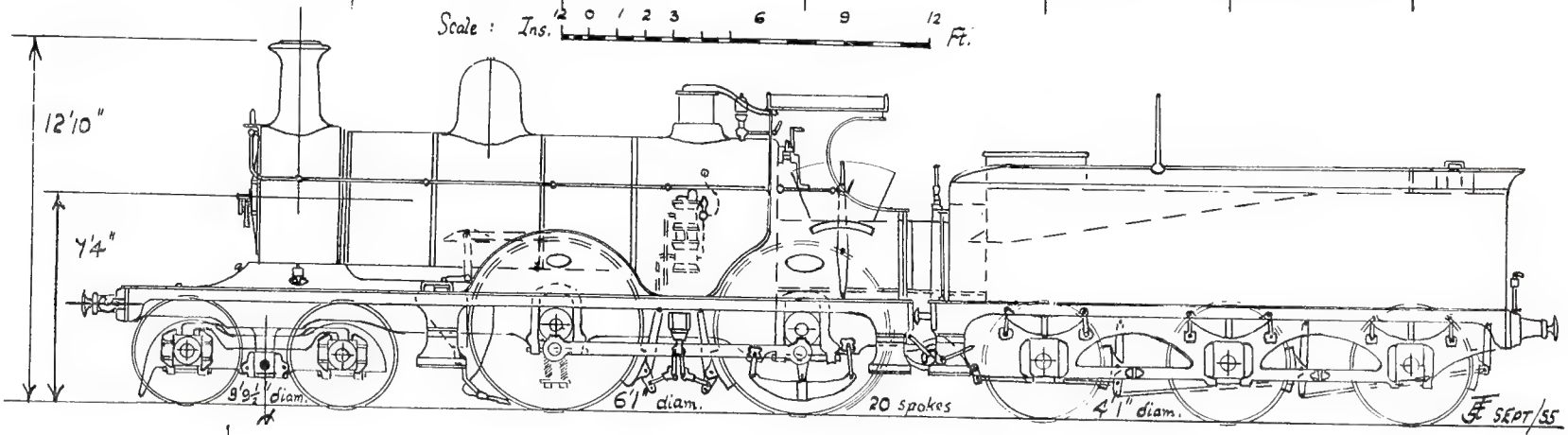
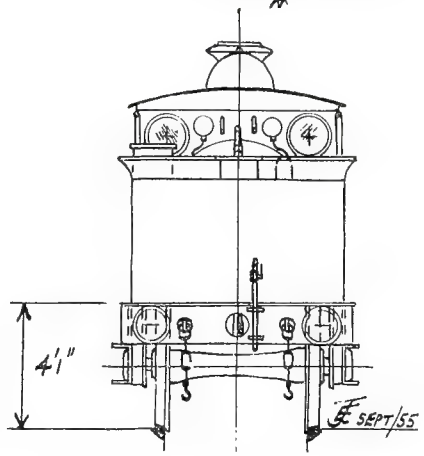


Fig. 5







Great North of Scotland Railway

T CLASS 4-4-0

Drawing 4mm. scale by J. A. N. Emslie

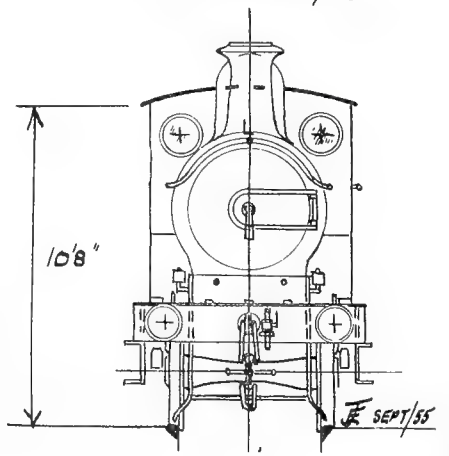
All "Railway Modeller" drawings may be photostated to any scale for non-commercial use

PREVIOUS G.N.S.R. DRAWINGS

October 1954, p. 242 ... ...
July 1955, pp. 160, 161 ... ...
8ft. W.B. bogie

October 1955, p. 240 ... ...

48ft. 6in. corridor compo.
48ft. passenger brake van
48ft. 7-compt. 3rd
Class "E" 0-6-0T



CLUB NOTICE BOARD

featuring popular personalities and society news

Personality Parade No. 49

Graham P. Overton

Model Railway Club

Graham Overton began, as so many enthusiasts did, with Trix, but converted to scale in 1949. His first hand-built locomotive was inspired by J. H. Ahern's article on his Himalaa—Darjeeling 0-4-0, and proved a success, completely confounding the critics at the M.R.C. track night. In 1950 came the first working layout, a 4mm. scale 16.5 gauge free-lance line. This soon gave place to a 7mm. scale narrow gauge system, which lasted in its turn until 1952, when he was converted to "EM" gauge.

At first the line was pure G.W., but soon the free-lance element infiltrated, and so the West of England Railway was born. Its latest guise dates back some nine months, to his marriage, and runs along two walls of his sitting room. It is being fully scenified, the major feature being an impressive Brunel type timber viaduct.

His other interests include railway photography and the study of prototype, while many of our London readers will know him as the popular manager of a well-known central model shop.

NOTES AND NEWS

Copy for these columns must be received five weeks before publication.

SLOUGH RAILWAY CIRCLE

The first annual general meeting was held at Grenville Hall on Friday, November 18, 1955, when the chairman, treasurer and secretary were elected. Group leaders were also elected for the various sections of the club: gauge "1," gauge "OO" fine scale, gauge "OO" Hornby Dublo, and the larger 3½in. passenger-carrying track.

We are now making arrangements for our first exhibition, which will be held in Slough during Easter.

Our gauge "1" live steam line, under the guidance of Captain Worrall, will be much in evidence, as also will the junior Hornby Dublo layout which is now nearing completion.

It was proposed that one Friday a month be set aside for a kind of "get-together," to be held at some suitable rendezvous where we would have an evening meal of some sort followed by a guest speaker to give us a talk on some topical railway matters. The cost would be about 10/- per head.

Anyone interested is cordially invited to pay us a visit. Club night is every Friday at 7.30, and whatever your interest in railway modelling you will find something to interest you.

Details from the hon. secretary, Mr. J. G. McInnes, M.I.Mar.E., 19 Westlands Avenue, Slough, Bucks.

RAMSGATE AND DISTRICT MODEL CLUB

During this month the above club will move into new and spacious premises at 14/16 Effingham Street, Ramsgate (at the rear of the fire station), owing to the impending demolition of the present headquarters.

The alternative premises will have better facilities for all branches of the club's activities. Membership is gradually increasing and the club's financial position is very sound.

The club is open every Wednesday and Friday evening from 7.30 to 9.30 and a cordial invitation is extended to all who are interested in modelling and handicrafts, also to members of fellow clubs should they care to pay a visit.

Further information can be obtained from the hon. secretary, Mr. E. Church, 14 St. Mildred's Avenue, Ramsgate.

ILFORD AND WEST ESSEX M.R.C.

Our appearance at the Model Railway Hobby Show was very enjoyable, and, we think, successful. Most of the layout's troubles had been dealt with, and running went well. The scenic effects, too, were more numerous, and the high-level station looked well.

We made an appearance on television, which from all accounts was recognizable and flattering; it was as well the camera couldn't read our thoughts during the taking. We were not sure then "who did what, and how, and with whom."

Particulars from Mr. R. L. Riddle, 36 Vernon Road, Seven Kings, Essex.

BRISTOL 7-4-2 CLUB

The Bristol 7-4-2 Club holds a running or working night on the club "OO" gauge layout every Friday at 7.30 at 1 Richmond Park Road, Bristol 8. Interested readers are invited to attend or to contact the hon. secretary, Mr. G. J. Faulkner, 54 Ashton Road, Bristol 3.

NORTH MIDDLESEX MODEL RAILWAY CLUB

We commence the new year with the annual general meeting on January 4. The committee for the next twelve months comprises Mr. E. C. George (chairman), Mr. R. A. Mills (secretary-treasurer), Messrs. R. Hammond and L. Ryder (construction advisers) and Mr. J. Pursey (publicity organizer).

We thank the retiring chairman, Mr. T. Haydon, and secretary, Mr. Jaggard, for their many years' service to the club.

On January 25 we are to have the pleasure of a visit from Mr. L. J. Earl to our headquarters at Lacey Hall, Hazlewood Lane, Palmers Green, N.13. Mr. Earl (retired L.M.S. driver) will be talking about his footplate experiences on the "Royal Scot."

We still have room for new members and all "OO" railway modellers are cordially invited to join us on Wednesday evenings from 7.45 till 10. Two-rail and three-rail enthusiasts catered for. Any inquiries to R. A. Mills, 37 Compton Road, N.21.

HISTORICAL MODEL RAILWAY SOCIETY

Mr. F. W. Chubb will give a talk entitled "Why gauge '1'?" to the Historical Model Railway Society on January 2, 1956, and Mr. C. Hamilton Ellis will address the society on February 6, taking as his subject "Drummond on the South Western."

Both talks will begin at 7 p.m. at the headquarters of the Stephenson Locomotive Society, 32 Russell Road, W.14.

JANUARY MEETINGS

BIRMINGHAM MODEL RAILWAY CLUB
5—Discussion evening.
11—16.5mm. layout construction.
19—Mr. J. H. Moss (Jr.): "Holidays and railways in colour."
25—Exhibition layout maintenance.

BOLTON MODEL RAILWAY CIRCLE
11—At 32 Wyresdale Road, Bolton. "Small layouts."

BRISTOL 7-4-2 CLUB
6—"How I make points" (ten-minute talks by members).

COULSDON MODEL RAILWAY SOCIETY
2—Annual general meeting.

FYLDE MODEL RAILWAY SOCIETY
11—H. Simpson 38 Cross Street. N.S.
25—P. Troughton, 21 Ash Drive, Poulton. Lights.

HULL MINIATURE RAILWAY SOCIETY
5—Track night.
12—The annual dinner.
19—Track night.
26—Juniors' night. Lectures and demonstrations by the junior members.

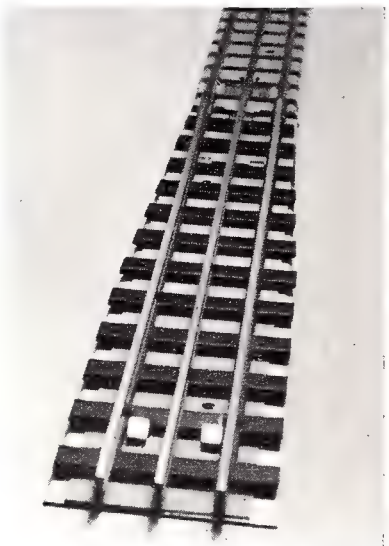
NEWS AND VIEWS OF TRADE INTEREST

TRADE

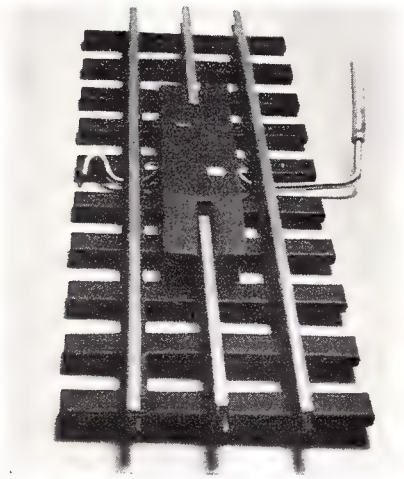
WRENN TRACK ACCESSORIES

Wrenn universal crossing.

THE Wrenn range of "OO" gauge universal track has recently been extended to include several additional useful items, which we illustrate. The most important of these is the universal crossing priced at only 11/8, completing the range of universal pointwork. It consists of a diamond with movable frogs and switch-blades, thus providing a continuous support to the wheel and permitting the use of any wheel standards. Furthermore, in the two-rail version the frogs are automatically electrified without the need of manual switchgear—a useful feature.



Wrenn Hornby Dublo adaptor.



Wrenn Tri-ang pattern uncoupling ramp.

Three adaptor rails are now provided to enable Wrenn track to be joined to the three popular proprietary makes, Hornby, Trix and Tri-ang. These consist of short lengths of Wrenn track mounted on tapering aluminium bases to bring the track up to the height of the proprietary tracks. The Hornby and Tri-ang adaptors are provided with suitable fishplates. The adaptors cost 2/11 for Hornby, 2/9 for Tri-ang and 3/4 for Trix.

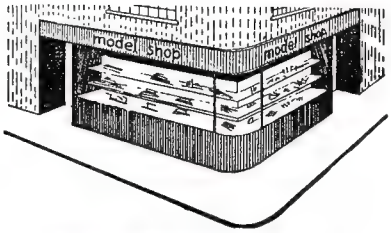
The two types of decoupling units available are priced at 3/6 each and consist of a small section of Wrenn track in which a piece of fibre is mounted. This fibre is shaped so as to lift the coupling arm, and can be raised by means of a small wire lever at the side of the track.

We feel sure that these additions should prove extremely useful and add still further to the popularity of Wrenn products.

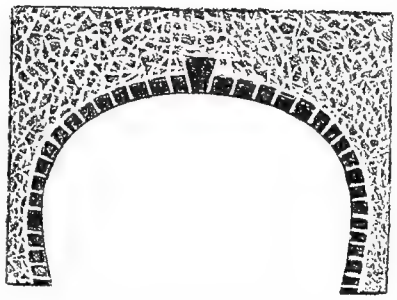
SOUTHGATE'S MODELLING KIT

For 3/6 Southgate Hobbyshop are offering an attractive pack of short balsa and plywood offcuts, together with a Trix X-acto 1001 knife, a pencil, a sheet of garnet paper and some suggestions for modelling projects. The kit is excellent value, and is of particular interest to beginners.

WINDOW

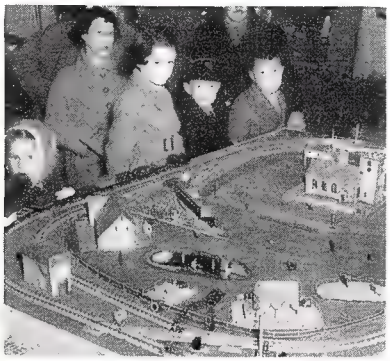


TUNNEL MOUTH



Southgate Hobbyshop double-track tunnel mouth.

Messrs. Southgate Hobbyshop have submitted for our inspection a pair of attractive tunnel mouths in strong plastic which they have introduced, for double and single track. Our illustration depicts the double-track tunnel, which costs only 2/11 and, as can be seen, is an excellent replica of a freestone face in full relief. These useful adjuncts to the scenic picture are to be thoroughly recommended.



This interesting railway was exhibited by the well-known Bridlington dealers, Bobbys, at the recent Bridlington Hobbies Exhibition at the Town Hall.

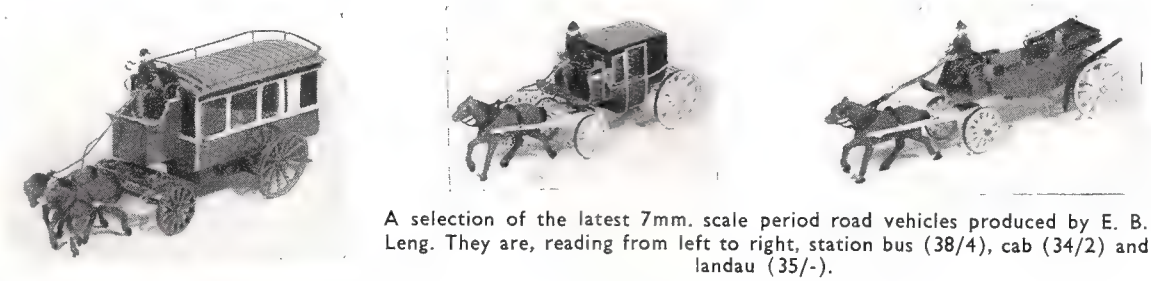
(Photo, " Bridlington Free Press.")

" MIXAFIX " POLYMER ADHESIVE

This new adhesive has several interesting properties. It consists of two pastes, A and B, which are mixed in equal proportions immediately before use. When this is done, a chemical reaction is set up, which continues until the entire mass has set hard. There is thus no shrinkage. More important still, the final product has considerable powers of adhesion, and thus " Mixafix " can be used to join many materials which have hitherto been something of a problem.

We tried " Mixafix " on a set of metal parts, and found that after twenty-four hours the parts so firmly held that it was quite impossible to separate the joint, as the metal distorted under the strain before breaking point was reached. Moreover, the mixture was sufficiently tacky at the start to make it possible to locate the parts in place, press them firmly together, and leave to set without any locating jig or fixture. This, however, would not apply to any but the lightest parts secured to a near-vertical surface.

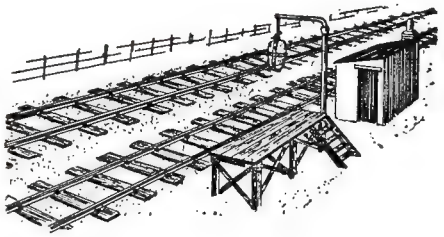
We can recommend this new adhesive for any joint which cannot be made by conventional means—the addition of details to a cast, moulded or even painted locomotive body springs immediately to mind, as does the addition of balance weights to mazak- or plastic-centred locomotive wheels. Its price is 5/- for the pair of tubes, but against this must be set the fact that not only does " Mixafix " do many hitherto impossible sticking jobs, but so little is required that it is, in fact, extremely economical.



A selection of the latest 7mm. scale period road vehicles produced by E. B. Leng. They are, reading from left to right, station bus (38/4), cab (34/2) and landau (35/-).

READERS' LETTERS

This space is reserved for the free exchange of readers' ideas and opinions



THE ALDEBURGH BRANCH

As a Great Eastern fanatic, I have much enjoyed the liberal sprinkling of G.E.R. articles and drawings which you have published.

I hope Mr. A. G. Thomas will not be cross if I ask you to publish one more picture of the Aldeburgh branch to complete the picture he draws so well. My picture shows the typical G.E.R. end of platform, the signal box and the rather ancient G.E.R. starter.

Prestwich. W. J. NAUNTON.

A WORTHY CAUSE

To encourage lads aged fifteen and upwards to take an interest in hobbies and crafts, the London County Council offers recreation facilities at junior men's evening institutes.

At the school with which I am concerned, a number of students are full of enthusiasm for making a model railway layout, and they have planned a small portable layout which is being made up. But like most of us when we were younger, they lack the hard cash to buy all the equipment they would like for this layout.

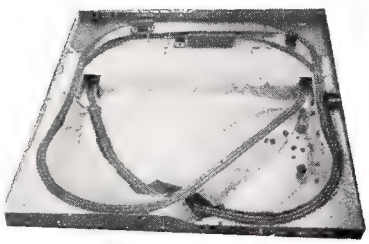
Could I appeal to any railway modeller who may have any discarded rolling stock, buildings, or other equipment in 16.5mm. gauge that is no longer of any use, no matter what the condition, to send it to these lads?

If you can assist by presenting any discarded equipment, it will be of great help in encouraging these lads to come to the institute instead of roaming the streets at night, and at the same time encourage them in our grand and absorbing hobby.

Any gifts would be appreciated if sent to me at the following address. I take this opportunity of wishing all fellow enthusiasts a prosperous new year, with many happy hours of modelling.

D. C. EDWARDS,
Model Engineering Instructor,
Robert Browning Men's (J) Institute,
Vauxhall Street School,
London, S.E.11.

"TT" GAUGE



Mr. Keech's "TT" gauge layout.

I read with interest the letter from P.B., and the comments made in the editorial regarding "TT" gauge modelling.

I started railway modelling two years ago, and for the first six months I had no layout at all, due entirely to the space problem. The gauge which as a beginner I had had forced upon me was unsuitable, to say the least.

With six months of turmoil and unsettlement behind me, the realization that there was another gauge smaller than "OO" gauge came as a shock and a salvation. I was puzzled, and still am, that "TT" gauge was so very little modelled and yet held all the answers to problems which faced myself, and which must surely face all beginners. Is it right that one should "make do" for so long when serious modelling could be so much more advantageous?

I am now seventeen, and look forward to many more years of modelling. The problems I meet, although fairly numerous, help to boost my morale when they are overcome. My space problem advice to those who moan is "Change your gauge and cease to groan." Whatever space was made available to me now, I would not change from "TT" gauge. Why should I?

Bedford. R. KEECH.

SCALE TIME

I read with interest the query on scale time in the November RAILWAY MODELLER.

My own admittedly unscientific method was as fol-

lows. On my first layout, a 9ft. branch line, I postulated that one hour "OO" time equalled two minutes real time. Assuming my branch was five miles long and trains travelled at 20 m.p.h., a journey would take fifteen minutes by "OO" time or half a minute by real time.

Thus my first train was the 8 a.m. workmen's train. It reached its destination at 8.15 a.m. and returned at 9 a.m., with passengers from the express. By real time it left at zero, reached the junction at 0.5 minutes (less actually), and set out back at 2.00 minutes. This gave me one and a half minutes real time for any marshalling.

The whole sequence of operations from 8 a.m. till 10 p.m., therefore, took twenty-eight minutes.

It frequently—and realistically!—happened that I got behind schedule, and then had to scurry, with one eye on the second hand of my watch, to keep to timetable.

With a much larger layout, including a continuous run of about fifteen feet, two branches and a complicated timetable of connections, however, I find that the 1 hour=2 minutes "scale" is too severe. Shunting operations cannot be carried out as easily with a dozen wagons as with four, and all inside thirty—sixty seconds. I am therefore casting about for another formula.

But please let no mathematician tell me my scale time is wildly out of scale—I know it is! But it worked on a small layout and extended to perhaps 1 hour=4 minutes, and the inter-station distance adjusted accordingly, it should work again. And if it works and gives reasonable realism and keeps me on the hop, I'm happy.

Glasgow. A. R. THOMPSON.

In your reply to C.N.J., St. Leonards-on-Sea, which appeared in this month's RAILWAY MODELLER Advice Bureau, you stated that "time can be scaled." You say that the problem is a thorny one, but not having seen any mention of it before I would like to give my views on your statement.

I do not think time can be scaled. Taking "EM" gauge, 4mm. to 1 foot, a scale mile is represented by approximately 69ft. 3in., so if a model takes one minute to travel that distance it is surely running at an equivalent prototype speed of 6 m.p.h. A model travelling at this rate might appear to be travelling at a much slower prototype speed because of the difficulty of realizing that viewing a model from one yard away amounts to seeing the prototype from 76.2 yards. Notice how slowly aeroplanes seem to be travelling when seen from the ground, compared with their actual speeds.

Now taking the case—or should I say the pendulum?—of your hypothetical 4mm. scale grandfather clock, I calculate that the clock would indicate the passing of one hour in 6.87 minutes. At this rate, for the "EM" train to travel a scale mile in one minute G.R. (grandfather time), it would have to do it in 6.87 seconds, an actual speed of 7.8 m.p.h. !

I realize that some modellers do speed up their "railway clocks," and in no way do I wish to condemn them, but I cannot see how you can justify "the compressed time scale that our railways should run on."

Barnehurst. J. S. BROOK-SMITH.

Whereas I must agree with your answer regarding the scale pendulum, to the second part of C.N.J.'s query in November's Advice Bureau I feel I must put forward another point of view.

If our trains are to run at scale speeds, surely a second must still be a second. Distance is scaled down to 4mm. : 1ft., therefore a train doing, say, 30 m.p.h. will still require the same time to cover the distance whether in full size or scale (30 m.p.h. is 44ft. per second). 44ft. in scale is approximately 6.9 full-size inches, so if our train takes one second to cover 6.9 inches it must be travelling at 30 m.p.h. Therefore a second in scale-size working must be the same as a second in full-size working. Time waits, nor hurries, for no man, whether real or model, so let us run our trains to time.

Northwood. G. C. SMITH.

Mr. Smith's argument is a circular one. He begins by stating that a model train that covers 44 scale feet in one second is travelling at 30 scale m.p.h. This involves the assumption that one second model equals one second actual time and cannot therefore be used to prove this assumption true !

Consider a 3ft.-long pendulum—this takes roughly one second to swing. Now consider a 12mm.-long pendulum—the rate of swing is demonstrably faster; try it for yourself ! Time can be scaled; in fact it must be if any comparative results are to be gained from a model experiment.

However, as we cannot alter our time perception, there is little point in considering it. The case of the so-called scale-time clock is quite different, as its purpose is twofold—to enable a day's timetable to be got through in a reasonable time and to compensate for the underscale distance between stations on a model railway.—C.J.F.

LOST, STOLEN OR STRAYED ?

When at the Model Railway Conference at Birmingham on October 2 I handed to the chairman of the business meeting a letter I had received from the German chairman of the European model railway organization, a translation thereof, and a print of the proposed European standards for model railways, the latter probably the only copy in Britain. The chairman informs me that he left them on the top table where he was sitting, for general inspection.

However, these important papers have not been seen since. Can you please be so kind as to print an appeal for the return of the papers to me here ? Some interested person must have borrowed them and omitted to return them. The hotel management assure me that they were not found after the meeting.

6 Chester Street, Edinburgh 3. W. LOCH KIDSTON.

TALYLLYN CALENDAR

The 1956 *Talyllyn Calendar* is undoubtedly the best yet. Costing 2/6 (post 3d.), it provides six fine recent views of this famous line, with two months on each page. Another T.R.P.S. publication is a 2/6 booklet, *The Talyllyn Railway in Pictures* (post 3d), which consists of thirty-two pages of excellent views of the line. Both can be obtained from R. K. Cope, "Brynglas," Beckman Road, Pedmore, Stourbridge.

ADVICE BUREAU

The Bureau is at your disposal to assist you with your problems. The service is free, individual and personal, but we reserve the right to publish any query we consider to be of interest. The advice given is based on the experience and opinions of our staff.

Queries should be addressed to the Peco Technical Advice Bureau, Pecoway, Station Road, Seaton, and should be accompanied by a s.a.e. and coupon on page ix. We regret that we cannot prepare special designs for individual readers.

I am building a North Eastern Railway layout about the period 1900-10 and I am lacking certain information. Could you tell me the colouring of locos and rolling stock and also what colour scheme was used for the stations, signal cabins and other company buildings?

Were there many non-clerestory carriages at this time and did the N.E.R. ever possess any steam railcars?

C.B.F., LEEDS.

[We are indebted to W. H. Tate, of the Manchester Model Railway Society, for a very complete answer to this query. As we feel sure many readers will find it of use, we print Mr. Tate's reply below.]

With the assistance of other N.E.R. enthusiasts in the M.M.R.S., I have gathered the following information for you, which I hope you will find of some use.

The colouring of locomotives and coaches is, of course, quite impossible to describe in words, but the former were (at the period to which you refer—1900-10) painted a yellowish shade of green, and the coaches a rich crimson lake, with fairly simple lining out. Fortunately, in engine 1621, and an actual part of a N.E.R. passenger brake van, both colour schemes are in existence in the Railway Museum at York, and to these I would refer you for authenticity.

All woodwork on stations, signal cabins and smaller buildings was white, for these buildings were usually mostly brick and/or stone and two-colour woodwork was almost non-existent. After such period of time it is, of course, difficult to say this with dead certainty, but as a general rule I think it is fairly safe. Goods warehouses, and similar "utility" buildings were usually creosoted and weathered off to black. Some of these are in existence on the old N.E. system, and should be studied.

Coaches in the 1900-10 era were of three patterns, as far as the roofs went. The older ones, of which there were many, had the fairly flat roofs, and usually had the birdcage look-out over the guard's brake van end. (I saw two of these myself last year at Leeds, so you are fortunate in having examples to work to !). At that same time there were many clerestory-roofed, both 45ft. and 52ft. Some of these are also still in existence. The third pattern, which were just coming into service, were the elliptical-roofed ones, of which plenty still remain—we even have some in Manchester, which I see regularly!

Railcars. No, the N.E.R. never possessed any steam railcars in its separate existence. It did have odd trial vehicles of petrol and petrol-electric pattern shortly after 1910, but these were not continued. The steam railcar period on the N.E.R. system actually began after the grouping in 1923, when they began building Clayton and Sentinel steam cars of various types, 100 and 200 h.p. four- and six-cylinders and various others, such as "Tyneside Venturer," "Phenomena," and so on. However, they are outside the scope of your query, so can be ignored, though of the eventual fleet of 100 of these vehicles the great majority ran in the N.E. area. The rest were mostly in Scotland.

For further information I would refer you to the *Locomotive Magazine* of 1913, which is devoted almost entirely to the rolling stock of the N.E.R. and which gives vast amounts of information and numerous drawings and photographs. The same journal in various other issues has excellent references to the excellent North Eastern Railway.

BOOK REVIEW

North British, by C. Hamilton Ellis (Ian Allan, 25/-).

For one who is apparently immersed in tradition, Hamilton Ellis has an uncanny knack of iconoclasm. On this occasion we find nothing less than the suggestion that Stroudley was colour-blind, and that when he referred to gamboge as "improved engine green" he actually believed that it was ! Your reviewer, who has difficulty in distinguishing between pale shades of blue and green, finds this a reasonable and logical conclusion, but wonders what the reaction of the more rabid Brighton fans will be to any suggestion that the Master in any way fell short of perfection.

There is no question that a history of the N.B.R. has been long overdue, for despite the fact that it was the largest of Scottish lines, and the fifth largest in Britain, this is the first complete story that has yet been published. The writing is fully up to Hamilton Ellis's standard—lucid, eminently readable, and enlivened by anecdote.

Needless to say, the Tay Bridge disaster occupies considerable space, and a very complete analysis of all the relevant facts is given. This we believe is the first popular account which takes into account all the factors, and from it we realize that Bouch was not wholly to blame. Admittedly, the preliminary survey gave an inaccurate picture of the strata, but civil engineers have made this mistake before and since. Admittedly, he did not make sufficient allowance for wind stress, but at that time knowledge of wind pressure was rudimentary. The important point, so often overlooked, is that the bridge was so badly constructed that, even had proper allowance been made for wind stress, the structure might still have failed simply because the iron columns were so badly cast as to be a positive disgrace to British engineering. We are pleased to see that belated justice has been given to one who had the misfortune to crown a worthy career with one monumental mistake.

This book is another of Ian Allan's series of 25/- railway histories, and one that can only enhance the reputation of this invaluable section of the railway bookshelf.

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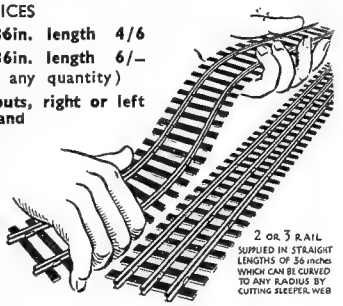

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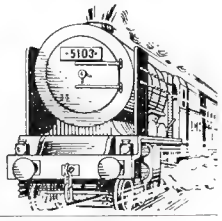

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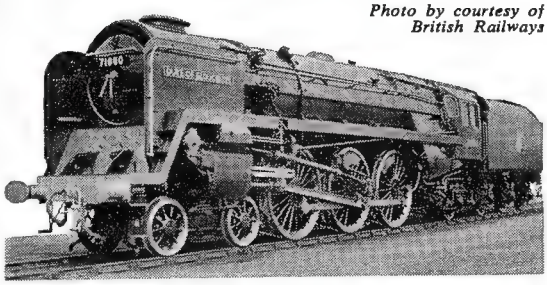

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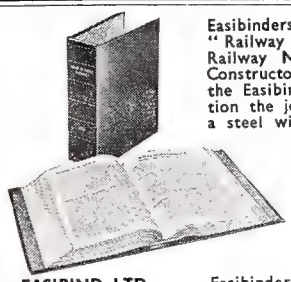
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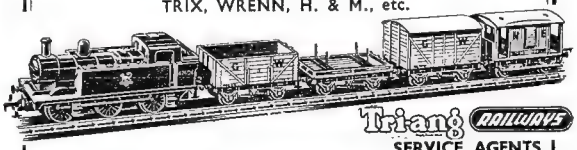
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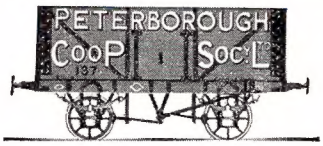

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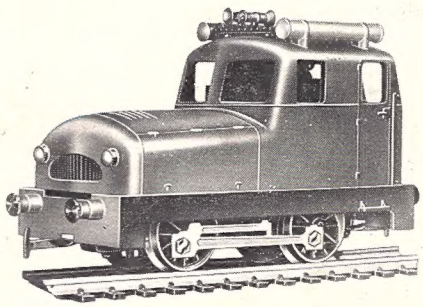

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